The Builder.

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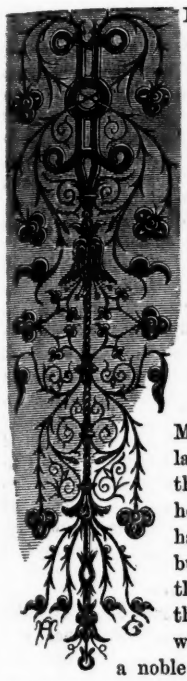
Dropmore, Bray, and Eton.



IN our last, something was said of remarkable trees of great age; but they who would see wonderful trees of comparatively no age, should make a trip to Dropmore Park, which is not far from Slough or Maidenhead; and through the good feeling of Lady Grenville, the owner, may be seen on any week-day. A pleasant and instructive morning may be spent thereabout. The house at Dropmore was built by George the Third's Prime Minister, Grenville, and the land was then part of a heather-covered common. The house itself, a low building, has no architectural features; but it is worth while noticing the good effect produced by the height of the verandah which surrounds it, suggesting a noble suite of apartments. The gardens, however, are the attraction: rare ferns and other plants are found at every step; and

> " rich flowers,
> Which look as if the gems of the old earth
> Had taken root and grown into the light."

Near to the house, some masses of natural concrete, from the neighbourhood, are disposed as archways and otherwise; and scattered about will be seen evidences of Lord Grenville's visit to China,—especially in one summer-house, where are found Chinese works of many kinds: tiles, plates, embroidery, carvings in jade-stone, cane-work doors, and a good picture. Every inch of the little place is worth examining, though at first sight it has a dusty and tea-garden aspect. The grounds are admirably cared for; the trees singularly luxuriant and beautiful; while beneath,

> " The soft herbage seems
> Spread for a place of banquet and of dreams."—*Bryant.*

There are 100 acres of such grounds, and 13 miles of paths; but you need not walk far before meeting with some of the unequalled pine-trees which form the chief glory of the place; an *Araucaria imbricata*, for example, the finest in Europe; a *Cedrus Atlanticus*, and a *Pinus Douglasii* of most startling beauty, sown only thirty-four years ago. The araucaria, which is about thirty-five years old, is 45 feet in height, and, with its snaky, or, as others might describe it, antler-like branches, forms a picture of wonderful beauty. One of the garden-houses, with overhanging eaves, is remarkably well placed, and from the mount Windsor Castle comes charmingly into view. It is marvellous how much of beauty, of variety of form and tint, is thrown together by Nature's lavish hand to form a landscape!

Not far from Dropmore is the Church of Stoke Poges, the churchyard of which is probably the scene of Gray's "Elegy." Approaching from the east, an ugly lumpy memorial of the poet is first seen in a neighbouring ground, the sides enlivened with quotations from his writings. The remains of the poet lie in a vault near the east end of the church, where he had buried his mother and aunt Antrobus, with a plain altar-tomb and inscription, wherein he mentions the former as "the careful, tender mother of many children, of whom one alone had the misfortune to survive her." The church is a venerable edifice of several periods, with an ivy-mantled tower and a wooden south porch. Close by are two large yews of great age. There is no tree more suggestive than the yew. Does its name, *Táxus*, come from *toxon*, a bow, or from *toxicum*, poison? Pliny is said to say, on the other hand, that poison was so called from this tree, which was considered poisonous. The word "yew" some derive from the Celtic "Iw," sometimes pronounced "If," and signifying verdure. *If*, it will be remembered, is the French name of the tree. It grows for a hundred years, and then remains stationary for centuries. The wood is tough and almost indestructible:

> " a living thing
> Produc'd too slowly ever to decay:
> ——— each particular trunk a growth
> Of intercepted fibres, serpentine,
> Upcoiling, and inveterately convolved."

In the days gone by, the durability, strength, and elasticity of the wood of the yew recommended it to the archer for the formation of his bow. In his hands,

> " The yew, obedient to the bender's will,"

became a most destructive instrument, and owing to the strength and skill with which it was used, in 1172, Henry II. made an easy victory of the Irish. At that time the long-bow used by the English was unknown. On such occasions, Froissart describes the English arrows as discharged so "wholly together, and so thick, that they seemed like snow:" an evidence of the great elasticity of the rebounding bough. The extensive use of the yew in the formation of bows produced a dearth in the supply; the trees were mostly destroyed, and would probably have been totally extirpated but for the superstition that had given a ue to some of them in connexion with relig s establishments. Supplies were sought for n abroad, and it was enacted that ships trading Venice should, with every butt of Malmsey, import ten bow-staves for the public service. The more extensive planting of the yew-tree in England was prevented by the belief that it was prejudicial to human health, spread death or pestilence, and that

> " Nor wilding green, nor woodland flower,
> Arose within its baleful bower."

It was, nevertheless, thought to have an affinity for poisonous effluvia, and therefore to be a fit inhabitant for the churchyard, where it was supposed to act as a sort of filter in absorbing the bad airs. Master Robert Turner, who wrote a book, in 1664, on the "temperature" of plants, thus states the opinion of the times:—

"The yew is hot and dry, and hath such an attractive quality, that if it be set in a place subject to poysonous vapours the very branches will draw and imbibe them. Hence it is conceived that the judicious, in former times, planted it in churchyards, on the west side, because of those places being fuller of putrefaction and gross oleaginous vapours exhaled out of the graves by the setting sun." Master Turner further says, that by means of the yew, "have sometimes been drawn up those meteors called *ignes fatui*," by which divers have been frightened, supposing some dead bodies to walk. This author does not believe in the superstitions of the monks, but says, "Whereso-ever it grows it is dangerous to both man and beast, according to some authors; how much more, then, if it be encompassed with graves into which the lesser roots will run and seek nourishment?" He also says, "that, besides other creatures, rabbits have been poisoned with it; and the very lying under the shadow hath been hurtful; yet the growing of it in a churchyard is useful, and therefore it ought not to be cut down upon what pitiful pretence soever."

Fifty years before the time of Master Turner's book, one Gerarde had declared this opinion to be a mere bugbear. The yew-tree attains a great age. Those at Fountains are said to be upwards of 1,200 years old. The yew at Ankerwyke, near Windsor, is supposed to have witnessed the signing of the Magna Charta by King John at Runnymede. St. Pierre says, "I have seen in Lower Normandy an aged yew-tree, planted in the time of William the Conqueror: it is still crowned with verdure, though its trunk is hollow and split into upright divisions, through which the daylight peeps, like the distended staves of an old cask." The bulk of many of these trees is enormous. One, at Warblington, measures 26 feet in circumference; another, at Crowhurst, 30 feet; a third, in Leeds churchyard, Kent, 31 feet; and a specimen discovered by Pennant, in a churchyard in Perthshire, 56½ feet in circumference. Most of these "monsters," as Evelyn calls them, are hollow, and put to a variety of uses: some as tool-houses for the sexton and husbandman. It is noticeable that from arrows (most probably shafts from the yew-bow) fell three kings of England: Harold, at Hastings; William Rufus, in the New Forest; and Richard Cœur-de-Lion, at the Castle of Chalons, in France.

The yews, however, have led us to a digression. The house at Stoke, where Gray's mother lived, and where he was accustomed to spend his vacations, still remains; but the Old Manor-House, the scene of the "Long Story," with

> " The rich windows that exclude the light,
> And passages that lead to nothing,"

is nearly all destroyed.

Gray, in a well-known letter to Horace Walpole (1737), describing his neighbourhood, speaks of a forest he has near him ("the vulgar call it a common"), including "most venerable beeches and other reverend vegetables," that dream out their old stories to the wind. Venerable and ghostly these Burnham beeches truly are. They are all pollarded; it must have been done years ago: tradition says, by Cromwell's soldiers; and so they have taken all sorts of wild shapes, reminding one of Hood's "blasted elm,"

> " that stands
> So like a man of sin,
> Who frantic flings his arms abroad
> To feel the worm within;"

and they provide a pillar'd shade, where, as another poet says,—

> " ghostly shapes
> May meet at moonlight,—Fear and trembling Hope,
> Silence and Foresight—Death the skeleton,
> And Time the shadow."

It is a charming place, nevertheless, for a ramble on a summer's day.

Being tired, suppose we now get to the Thames; and, after a glance at lordly Cliefden, its heights covered with luxuriant foliage, pull down the river to Bray.

The picturesque old church here is undergoing repair and renovation, especially in the nave. The chancel was attended to, and with agreeable effect, a short time ago. Two of the carved heads terminating the label moulding of the arches separating the chancel from the aisles are good likenesses of the Bishop of Oxford and the vicar. Amongst the ancient memorials here is one of W. Norreys, 1592, who was comptroller of works, Windsor Castle. The ancient and picturesque Manor-House of Ockwells, two miles off, is on land granted in 1267 to Richard de Norreys, who was cook to Queen Eleanor; and his descendants remained there until the end of the last century. The monument of W. Goddard, on the north side of the chancel, including columns, entablature, and figures, after the fashion of the seventeenth century, was re-polychromed a short time since, under the direction of the Fishmongers' Company, with good discretion and agreeable result. We know of no better specimen of such work. This excellent Goddard founded (1627) Jesus Hospital, hard by, consisting of forty houses for forty poor persons, erected round a smiling garden:—

> " Not useless are ye, flowers, though made for pleasure,
> Blooming o'er field and wave by day and night,
> From every source your sanction bids me treasure
> Harmless delight."—*Horace Smith.*

The chapel, which displays some fair Perpendicular work, would seem to be of earlier date. In it there is a small collection of books.

In coming out of the churchyard you will have noticed the lich-gate. It has over it two chambers connected with an ancient charitable bequest; or,

as others might describe it, the gate is formed beneath a small dwelling, now occupied by the sexton. The gate at Barking, in Essex, also has a chamber over it. A collection of lich-gates would show more variety of design and peculiarities in the mode of opening the gate than might be supposed. In Herefordshire they are called scallage-gates. At Troutbeck, in Westmoreland, there are three stone lich-gates in one churchyard. In Cornwall, says the last number of the "Church Builder,"* it is not customary to bear the corpse on the shoulders, but to carry the coffin, under-handed by white cloths passed beneath and through the handles (a much more healthful mode), and this partly explains the peculiar arrangement for resting the corpse at the entrance to the churchyard, common even now, in that county, and which is called the *lich-stone*. The lich-stone is often found without any building attached to it, and frequently without even a gate. The stone is either oblong, with the ends of equal width, or it is the shape of the ancient coffins,—narrower at one end than the other, but without any bend at the shoulder. It is placed in the centre, having stone seats on either side, on which the bearers rest whilst the coffin remains on the lich-stone. Lich-stones are sometimes, but very rarely, to be found at a distance from the churchyard; in this case doubtless they are intended as rests for the coffin on its way to burial.

At Lustleigh, in Devonshire, is an octagonal lich-stone, called Bishop's Stone, having engraved upon it the arms of Cotton, who was consecrated Bishop of Exeter in the year 1598.

On one of the upright timbers of the gateway at Bray is cut the date 1448, in numerals of the ancient form. This, if genuine, is a very early example of the use of the Arabic numerals in this country. The earliest known is probably that on a stone in the interior of the tower of Heathfield Church, Sussex, 1445.† Gough, in "Funeral Monuments," gives a plate of early dates in figures; the oldest being 1454, found on a brass in Ware Church; and it seems clear that the arithmetical figures did not begin to be in general use for inscriptions in this country until towards the end of the fifteenth century.

Nell Gwynne, that noticeable "horse-breaker" of 200 years ago, lived at "Filberts" (afterwards "Cresswells"), close by.

The famous Vicar of Bray, who has given the place a reputation, such as it is, was one Aleyn, who held the office in the reigns of Henry VIII., Edward VI., Queen Mary, and Queen Elizabeth, and, according to Fuller, became Papist or Protestant just as it happened to be expedient, and yet asserted that he had always kept his principle, because it was this,—"To live and die the Vicar of Bray":—

> "And this is law, I will maintain,
> Until my dying day, sir,—
> That, whatsoever king shall reign,
> I'll be the Vicar of Bray, sir."

He might have been a much better man,—a much more learned and eminent man,—and yet not so celebrated as this story and this ballad have made him. What was Fuller's authority, by the way, for his statement?

A story is quoted in Murray's "Handbook for Berks and Bucks," showing how King James I. once, when hunting, rode forward to the inn at Maidenhead, and found nothing could be had because the Vicar of Bray and his curate were up stairs, and had bespoken everything in the house. Joining them, the adventure ends in the king leaving the superior to be always Vicar of Bray, but making the curate, who had consented to pay the king's score, a canon of Windsor, so that he might look down on the vicar and his vicarage. This, however, could not have been *the* Vicar of Bray, for Aleyn died in 1588. The repute of the Vicar remained connected with the inn—the Orkney Arms; and a century and a quarter ago, the following lines were addressed to the landlord of it:—

> "Friend Isaac, 'tis strange, you that live so near Bray,
> Shouldn't set up the sign of the Vicar:
> Though it may be an odd one, you cannot but say,
> It must needs be a sign of good liquor."

To which the said Isaac replied:—

> "Indeed, my friend poet, your reason's but poor,
> For the vicar would think it a sin
> To stay, like a booby, and lounge at the door,—
> 'Tis a sign there's bad liquor within."

Pulling on from Bray, Monkey Island may be touched at, more for refection than for the oddly-painted ceiling, showing monkeys in various positions, in the pavilion built there by a Duke of Buckingham. Hither come the Eton men to refresh; and a very good character they leave behind them, if a landlord is to be believed. You will meet some of them in their trim boats as you pass on your way, if it be the right time of day, as you will also many of the stately swans—swans with "two nicks" and more, that belong to some of the City companies, and have their nests on the aits or eyghts, as the little islands thereabout are called. Have we here, by the way, any clue to the naming of Eton? Norton is a town situate in the north; Weston, a town in the west; Sandton, a town on a sandy soil; and Eton (we are dabbling with what others have perhaps made clear) may be the town near the ait; or, as eyse is a British word for water, the town by the water.

Eton will be a good place with which to terminate the trip. It offers much to interest. No one sees it without thinking of Gray, and quoting—

> "Ye distant spires, ye antique towers,
> That crown the wat'ry glade,
> Where grateful science still adores
> Her Henry's holy shade."

Not that science does anything of the sort; but the expression satisfies. It would be well if science would set to work and make the most of the foundation. The present aspect of the schools is dispiriting and unsatisfactory, in the extreme;—the lower one especially, damp, dirty, and dark. No pictures, no maps, no forms of beauty! Where are the educational appliances for which medals are elsewhere given? If the International Juries are right, Eton must be wrong. The birch, at any rate, is still used, and is exhibited, with some gusto, by the housekeeper, who explains the mode of application without reticence.

Eton College appears to have been commenced in 1441; but the death of its founder, King Henry VI., and difficulties with the dean and canons of Windsor, led to delays, and it was not till 1522 that the college was finished. The chapel is now in an excellent state, glowing with stained glass. Old customs linger in Eton and Windsor; the memory of great names is about them; and here the eyes "make pictures when they are shut." Poets, too, have aided in rendering all this part of the country famous. Gray at Stoke; Milton at Horton, where he wrote "Comus" and "Lycidas;" and Pope, whose early home was Binfield, give it an added glory, and increase the pleasure which attends a ramble in it.

GOSSIP ABOUT THE INTERNATIONAL EXHIBITION.

Among things of merit connected with internal decoration of a semi-architectural character, are the articles composed of inlaid woods, shown in the Italian Division by Mr. Norchi. Some of the specimens display much ingenuity of device. There is a table-top, for instance, the design of which is formed of medallion portraits of the great poets and painters of Italy, which is very cleverly managed; the whole of the colours as well as shades being produced by the natural colours of various woods. The connecting ornament is produced in a similar manner, and is of a very suggestive character; showing what fine effects might be produced in important apartments by means of inlaid wood panelling treated in the manner just described. Decoration of this kind, both as to colour and device, might be made to supersede painting, with very good effect, and without too much extra cost, when the permanent character of the work is considered; which would not require continued renovation, as expensive as the first cost; as is the case with the tinted decorations of the paint-brush.

Similar works by Corridi Pasquale, of Leghorn, may be seen near to those just described, and are, in some respects, superior. There is, for instance, a table-top which he terms a *tavola intarsiata*, which is of very elaborate character; and the elaboration results in very satisfactory effects. The central subject is Neptune and Amphitrite. It is well designed for its purpose; and great ingenuity is displayed in the selection of tones afforded by various woods; none of the colours being produced by artificial means. Of a somewhat similar class of work, but different material, is the table-top exhibited by Tangassi, Brothers, of Volterra, situate in the midst of a district affording an unlimited supply of alabaster of various kinds, and of other similar substances suited to the fabrication of ornamental sculpture and other purposes connected with internal decoration. They have sought to turn these attractive materials to better account than the production of those quasi-ornamental vases, of various sizes, which are made there, and are to be found playing the part of second-rate chimney-ornaments all over Europe. In the present specimen of an inlaid alabaster table-top (exhibited close to the specimens of wood-inlaying just described), the Brothers Tangassi have produced a piece of inlaying, in differently-coloured alabaster,—white, orange, and brown,—which is very beautiful; the design being, moreover, very cleverly adapted to the style of work and the nature of the material. A summer-chamber, or cabinet, as the French term it, having its sides cased with a panelling of inlaid alabaster of this description, would have a charmingly cool and at the same time decorative aspect; especially if the other fittings were of suitable character. For instance, in each of the angles (or in only two of them) might be placed one of the alabaster candelabra exhibited in another part of the nave by the same artists, which would carry out the effect of the walls with admirable accordance.

These candelabra, which are of large size and massive form, are, in all their larger features, composed of dark brown alabaster, relieved by attached ornaments, in high relief, of the white variety. The effect of the contrasts so produced, in consequence of the over-profuseness of the white ornaments, and from the want of the blending tone of orange, which is so successful in the table, is rather what an American critic would call "loud;" but this defect might easily be avoided; especially by the use of inlays in addition to the reliefs. The effect, however, of such a summer cabinet as the one described, decorated with a central marble table, and also with candelabra from the atelier of the Tangassi, would, allowing for all drawbacks of occasional imperfect treatment, be singularly elegant; especially with a mosaic floor, which naturally follows as part of the arrangement.

There is also, in the nave, a glass stand and vase, both enriched with ornaments in ormolu, which would be a splendid addition to such an apartment, if borne up with a few other features of similar character. The vase and stand in question are, together, of about the same size as Messrs. Ostler's splendid glass candelabrum, but in an entirely distinct style well worthy of careful study. From the nature of the design, the work does not look so *glassy*, having more the effect of a magnificent work in rock crystal, and producing a general effect which is much more quiet and chaste than that of the eternal prismatic drops and cones which one has got so thoroughly tired of. Speaking of candelabra, the handsome Prussian works forming part of the magnificent present from the city of Berlin to our Princess Royal, on the occasion of her marriage, should not be forgotten. These candelabra are entirely of silver; certain effects of tone, if not colour, being introduced by means of burnishing, frosting, or oxidising the metal; the tones so produced being, in their relative positions, well calculated to heighten the effect of the design. There is, however, a cold classicism of style about Prussian designs somewhat similar to that which distinguishes a certain French epoch, known as *l'Ecole de l'Empire*, which is much less attractive than the more picturesque classes of design which have arisen from the recent study and appreciation of works of the different Mediæval periods.

The intricate forms, and still more intricate details, of Turkish architecture, which become so costly when conscientiously executed in stone or marble, have been well imitated in ironwork by Messrs. Barbegat & Co, in an elegant kiosk exe-

* Rivingtons, Waterloo-place, London.

† Journal of British Archæological Association, vol. iii.

cuted for the Pasha of Egypt. The drawing of this pleasing work, which is displayed among their remarkable productions in iron (which form a conspicuous object in the French Court), is sufficiently large to exhibit the details of this interesting *morceau* of iron architecture in all their delicacy. The work is entirely clothed in a garment of colours and gold; and, judging from the drawing, must have a very rich and elegant effect. Both French and English architects are almost entirely indebted to Mr. Owen Jones for their present knowledge and appreciation of the different styles of Oriental architecture; a knowledge which was inaugurated by the appearance of that accomplished artist's great work on the Alhambra. We may judge what was the English conception of Oriental art before that time by the monstrous gewgaw at Brighton—the Royal Pavilion—which was the work of some of the most accomplished artists of the day; among whom was the justly esteemed Repton, whose well-known taste in other styles is undisputed. The understanding of Eastern art was, however, at that time, a diseased artistic dream; and almost as much may be said of the professional ignorance respecting the true characteristics of our native Gothic, at the same period. The genuine characteristics and individual expressions of the different styles of Oriental art are now, however, well understood; and Moresque, Turkish, and Persian, are as well discriminated as Romanesque, Gothic, and Renaissance; as may be proved by the elegant Turkish kiosk of the Messrs. Barbegat, and many other recent works that might be cited. Among others of the kind alluded to, Messrs. Garrard's Turkish fountain may be cited; which, though merely a jewelled toy, approaches very near to the desired degree of accuracy in all that relates to general forms, as well as the lesser features, of elaborate detail.

In gold and silver works, and smaller jewelry, such as brooches and clasps, of an artistic character, Mr. Rudolphi has distinguished himself in the present Exhibition. His great niello plate, the silver and black niellos raised above the level of the gold grounds, after the manner of Russo-Byzantine works of the class, deserves high praise. The various niello subjects of this work form together a series illustrating the biblical story of Joseph. His smaller works, in oxidized silver, are full of an elegant spirit of design, some of the brooches, clasps, and other dress ornaments being of a highly artistic character, and worthy of being worn rather for their merit as works of art than for the mere intrinsic value of their material, as a precious metal.

Near to the stand of Mr. Rudolphi, the seeker after the curiosities of art, especially among the more highly wrought works of gold and silver of smaller dimensions than the vast shields and vases which alone attract the many, will not fail to notice an exquisitely wrought wreath of golden bay leaves. It will remind the Italian tourist of those wonderful specimens of ancient Etruscan jewelry which the recently discovered tombs of Etruria have yielded in such profusion to the great Italian museums. It is light, delicate, and yet full of the energy and character which the touch of the true artist can always impart even to the slightest texture, as in the case of those Etruscan jewels wrought by the Etruscan goldsmith of 3,000 years ago. The work in question is a crown of golden bays, which the town of Agen is about to present to its local poet, Jasmin, the last of the troubadours, whose story is too well known to require repetition. We English have more substantial methods of honouring our popular poets, but perhaps less graceful ones; and we have reason to know that Jasmin will be better pleased with his wreath of golden bays than with the golden rouleaux of a ministerial pension.

WORKS IN WESTMINSTER ABBEY.

The new pulpit which has been set up in Westminster Abbey, designed by Mr. Scott, and executed by Mr. William Farmer, is a handsome structure. It stands on the north side of the nave, at the sixth arch from the west; and is composed principally of magnesian limestone from the Mansfield Woodhouse quarry. It is octagonal. Round the top runs a capping of red Devon marble. The cornice is ornamented with leaves and flowers of the columbine. At the angles are figures of the four Evangelists and of St. Peter and St. Paul under canopies. In one panel is the face of our Lord, in white marble, well executed by Monroe. In the other panels are lozenges containing circular medallions of mosaic work in different-coloured marbles. The head has at present a spotty effect. The capping of the string which runs round the bottom of the panels is of grey Derbyshire marble: the string is ornamented with First Pointed foliage. The pulpit is supported on columns of Devonshire marble at the angles, and a larger one in the centre; the capitals being of Early Pointed character. The columns of the staircase are of the same. The figures of the apostles are well carved, but two are somewhat affected in attitude.——The window in memory of Robert Stephenson, of which we gave some particulars from the Gateshead paper, has since been set up on the north side of the nave, near the chancel. It has little to distinguish it as a work of art from a hundred others: indeed, if we must speak our minds, it is rather a poor affair,—mere manufacture.——One of the windows in the north transept is about to be filled with painted glass as a memorial of the late Mr. Vincent Novello. It will be executed by Messrs. Lavers & Barraud.——A plain tablet has lately been placed over the grave of the late Lord Macaulay, bearing only the following simple inscription:—"Thomas Babington, Lord Macaulay, born at Rothly Temple, Leicestershire, October 25, 1800. Died at Holly Lodge, Campden-hill, December 28, 1859. His body is buried in peace, but his name liveth for evermore." If we may judge from the thronging crowds which filled the abbey on the occasion of our visit (Saturday last), the fabric-fund will benefit by the visitors now in London. When the afternoon service began, 3,000 persons, we were told, had paid their sixpences to see the chapels.

MISMANAGEMENT OF PUBLIC WORKS IN INDIA.*

The present strength of the Public Works professional staff of the Madras Presidency numbers about four hundred engineers, sub-engineers, supervisors, &c., exclusive of the large number of writers, clerks, and other inferior assistants; the salary of the chief engineer being about 3,000*l.* per annum, and that of the district engineers about 1,200*l.* About two hundred of these are military officers of various grades: about seventy are natives, and the rest civilians. The military officers occupy all the best positions, and they all receive full military pay as well as their staff salary. Nothing is more common than to meet a young lieutenant of engineers, not twenty-five years old, and with scarcely any professional knowledge, receiving 700*l.* per annum, and 10s. a day travelling expenses, besides 30s. per month for office rent. Many of these young gentlemen, if in England, would hardly be deemed fit to occupy the place of a builder's clerk with 100*l.* per annum.

The injurious effect of this system, even in a military point of view, must be easily apparent. Officers, without sufficient influence to obtain staff appointments, or too fond of their military duties to desire a change from military to civil employ, remain with their regiments upon mere military pay; while those who possess the requisite amount of favour, and who care nothing about a soldier's life except the title,—these can for years, almost for life, leave their military duties to be performed by others, while they are receiving full military pay and a handsome civil salary as well. No objection can be offered to the plan of a certain number of military officers being employed in a civil capacity in time of peace; but all such extra appointments ought to be conferred only upon the oldest and most deserving. Their number should be limited to a few in each regiment; and while so employed only half military pay should be allowed them, and they ought to be placed under thoroughly competent civil officers, able to teach them in a proper and legitimate manner. Nothing would be considered a grosser breach of propriety than the placing civilians over military men when engaged in military pursuits; and why should half-taught soldiers be allowed to direct the operations of civil officers, far better qualified, often far more experienced and talented, than themselves, and whose whole life has been devoted to the study and practice of that science which a military officer is only superficially acquainted with?

The code of rules of the Public Works Department is contained in a book published under the authority of Government, containing about 600 pages of printing, quarto size. Nearly all these rules, which were compiled in 1857, are now obsolete, in consequence of the very many alterations that are constantly being made; and very lately a new code of rules has been drawn up which already reaches to twenty-five chapters, and is still unfinished. Besides this, there are the rules of the civil and military auditors; rules for keeping accounts, monthly returns, and forms to fill up in endless variety; the native languages to study, &c., &c. When all these are taken into account, it must at once be obvious that very little time indeed is left for the young officer to become acquainted with the duties of a civil engineer: as to architecture, such a thing is not even thought of.

The rules laid down by the Indian Government respecting the acquisition of the native languages are more mischievous in their operation than is generally supposed. By these regulations, no officer in the Department of Public Works, however talented, clever, or experienced, is ever allowed any promotion until he has learned to read, write, and speak one of the numerous languages of India. Even if he acquire this knowledge, he is often sent to another part of the country, where a new language is spoken. If he fail after eighteen months in passing an examination in the vernacular, ten per cent. is deducted from his pay; or he is sent back to his regiment; as if regimental officers were not required to know the native tongue. If he succeed in passing an examination, he is very likely to be removed to another station, and has to go over the same process again; and, as the Madras Presidency alone has some seven or eight distinct languages, his time is employed in becoming a linguist instead of learning to be an engineer. Besides this, officers whom it is desirable to accommodate are let off with a very slight examination; while those who do not possess the requisite amount of influence are most rigidly dealt with. I have known officers entrusted for many years with large and important public works quite unable to speak any native tongue; while others, quite able to converse with the natives, were rejected because unable to read and translate letters, &c. It must at once be obvious, even if the regulations were ever so impartially enforced, that their effect must be to keep out of the service those who have had the largest share of European experience, as they will be the least likely to attain a knowledge of an Asiatic tongue; while those born and almost educated in India speak it with the greatest facility. What would have been thought of such a system in Europe if our eminent engineers—our Stephensons, our Rennies, our Vignoles's, &c.—had been refused employment by the Continental States until they had acquired the language of the country? In India, plenty of natives can always be obtained sufficiently well acquainted with English to act as interpreters, and convey the orders of the superior officers to the workmen; and every one permanently stationed in India will learn as much of the vernacular as possible, merely for his own convenience; but the degree of proficiency must depend upon circumstances not having the slightest relation to engineering ability.

The system of keeping accounts is also another branch of the department open to the most serious objections. This system has been altered two or three times during the past six years, and is even now very imperfect: information of the most useless kind is required to be furnished, while items of the greatest importance are frequently omitted. The real effect of the system now pursued is to reduce all the officers to one level, not by raising the character of those lowest in the scale of ability, but by lowering all to the condition of mere machines; indeed the official forms required to be supplied by the various officers are so numerous and complex, that even the Madras Government expressed its regret that the duties of a district engineer were gradually becoming those of an accountant, instead of a scientific superintendent.

It is easy to guess the effect of this system. Attention to official forms and curious calculations are considered the standard of excellence, while practical skill, experience, and talent are completely ignored.

The late chief engineer, Col. Bell, upon leaving the department, addressed a circular to all young officers, exhorting them to devote their attention to acquiring a knowledge of the vernacular languages, and the system of accounts: designing, drawing, levelling, surveying, practical building, architecture, civil and mechanical engineering—these are considered beneath the notice of a Madras engineer officer, and are left to the native or East-India subordinates.

The districts of the Madras Presidency, twenty-four in number, are, many of them, of enormous extent: one (Bellary) comprises 13,056 square miles, with a population of 1,250,000 people: over each of these is one district engineer, and generally three or four assistants and a few overseers, the latter mostly privates or corporals from the European regiments. In some cases, from the

* See page 527, *ante*.

difficulty of travelling, a district engineer can scarcely reach some parts of his district above once in a year. Each district is subdivided into ranges, and the range-officers travel about with bullock carts, and lodge in tents or mud cabins hardly fit for an Irishman's pig. The subordinates—Europeans and East-Indians—badly paid, overworked, and with but little chance of promotion, are discontented; and, if possessed of any ability, leave on the first favourable opportunity that offers: indeed, among the overseers, &c., the Public Works Department is looked upon merely as an introduction to something else. The native subordinates manage better: by some unknown means they find opportunities of making money out of their countrymen without the chance of detection, and thereby enrich themselves at the expense of the Government; and, as the engineers are often removed to new districts, they are necessarily—for a time at least—in the hands of their native assistants.

It is certainly highly creditable to the Public Works corps, that, whatever deficiency they may exhibit on the score of professional ability, there is rarely any imputation cast upon their integrity. A more upright body of men, I believe, is not to be found in any part of the British Empire. They waste money, certainly, through incompetence or inexperience—and that often to a large extent; but, in the midst of numerous temptations and opportunities, rarely ever is an officer, or even a European subordinate, charged with peculation or dishonesty. Their faults are more the faults of the defective system under which they are employed; and while I feel bound, upon public grounds, to expose their numerous professional shortcomings, I feel equally bound to bear testimony to their high sense of honour and integrity, to their diligence, and often to their zeal in the public discharge of their duties. When a young engineer officer first takes up an executive charge, I believe in very many cases he would gladly avail himself of superior guidance and instruction; but this is rarely to be obtained: he is thrown entirely upon his own imperfect knowledge and his subordinate assistants, and compelled to do the best he can. He soon learns that attention to the official routine of red-tapeism is the great thing to recommend him to his superiors; and if his monthly returns are properly filled up, it matters but little whether his works are well done, or not. A few failures—such as the giving way of a new foundation, the falling in of an arch or a roof, the cracking of a wall, or the washing away of a supply channel or a sluice, are matters of no grave moment: such things have often occurred before; and failure and accident are common enough all round him, and he can hardly be expected to do things better than other people: besides, there is always the heavy rain, or the sudden storm, or the extra high fresh, to account for the disaster; as if rain and storms, and high freshes, were not common enough in India. If you tell him that such errors would ruin any man's professional prospects in England, he replies, that we cannot afford to do things as they are done in England,—never thinking that his mishaps cost far more than doing the work well at first. As to the natives, they are so accustomed to failures, that they look upon these occurrences as a matter of course.

It is for this reason that I advocate the importance of having proper, well-educated European civil engineers, experienced in British works, to give to the young military tyros suitable instruction. Young men from England, who have but just completed their articles, are of but little use. No respect is paid to their opinions, and no attention given to their instructions. They soon learn to do things as bad as their military brethren; and then the Government officers triumphantly point to them as a proof that engineers who have been educated in England are no better than the rest.

When a young lieutenant of the engineers comes out to India—generally at about the age of eighteen—he enters the Public Works Department as a matter of course; and is generally made a second assistant district engineer, as soon as he has passed his examination in Hindostanee; which—as he has learnt that language at school—is no great trouble to him. When an officer of infantry or cavalry wishes to join the department, and thus obtain staff employ, he has merely to make a small survey and section, and answer a few questions to a district engineer, and he receives a certificate of qualification for employment in the Department of Public Works. Such officers are rarely made district engineers; and they are liable to be called upon to join their regiments at any time, in the event of war breaking out; but, during their employment as engineers, they generally have the charge of executive ranges; and upon them very frequently devolves the duty of carrying out many very important works; and, with their limited knowledge and experience, it is a matter of no wonder that their work is so imperfectly performed. Building, to most of them, consists merely in piling stone upon stone, without the slightest regard to good workmanship. Carpentry, is nailing together a few palmyra beams; and excavation, digging a hole in the ground, carrying away the soil in baskets upon women's heads, and throwing it in disordered heaps. As to good masonry, good brickwork, or good carpentry or joinery, such things are quite unknown to them; neither do they appear to see the least necessity for making attempts at improvement. INDIAN.

THE WORCESTER CONGRESS OF THE ARCHÆOLOGICAL INSTITUTE.

THE reception of the Institute at Worcester was everything that could be desired. The return to the old custom of electing the president from the locality we visited was in this instance shown to be highly beneficial; and the cordiality with which we were welcomed was in strong contrast with that of some of the places in which we have pitched our tents, and where we have not had the advantage of the co-operation and aid of those in authority. The business commenced by the chair being taken by Lord Lyttelton, the lord lieutenant of the county. The usual complimentary speeches were made, and an address was read on the part of the corporation. When these proceedings terminated, we made a perambulation of the town, viewing the churches in our way; but they did not display many objects of interest, as they all have been patched, plastered, or added to—a process called perhaps restoration. One member said "The churches all seem to have come to grief;" and the reply was, "Yes, they have met with an architect." The principal and, indeed, the only object demanding any consideration, was "the Commandry," an ancient hospital, of which the hall remains in very good preservation. The roof, which is well preserved, was stated by Mr. Parker to be of the time of Henry VII. He also called attention to the curvature of the roof at the end of the hall, where the dais was supposed to have stood; stating at the same time that a dais meant a canopy as well as a raised seat; and the present was a good illustration.

The evening sitting commenced with a paper from Mr. Severn Walker, which was much too dry for a general audience, on the Ecclesiology of Worcestershire. He gave a catalogue and the statistics of the 252 churches in the county. Had they been required to be appraised, his paper would have been useful; but for the interest of the majority of his auditors, the number of towers at the west or at the east, or the tabular statement of the number of bells and similar particulars, were not very important.

He was followed by Mr. Freeman, who read a paper on Pershore Abbey, which we were to visit on the following day. To him succeeded Mr. Lysons, who read a notice of the rescue of Henry the Eighth "by three Gloucestershire men;" and the Hookes of Crooke, who are the descendants of one of the said gentlemen, may congratulate themselves, as the audience did, on their having "such a chronicler."

On Wednesday, the Mayor (Mr. Firkins), faithful to the traditions of corporations, and illustrative of his own liberality, invited the members to a breakfast at the Guildhall, which was responded to by "acceptance bounteous;" and, though one member had doubted the propriety of partaking of such hospitality before the labours of the day were commenced, the result showed that the worshipful the mayor was right in his appreciation of the necessity of anticipating the exhaustion arising from dry studies. We then adjourned to the sectional meetings, where the following papers were read, and upon which some discussion ensued:—

"The Life and Time of Lord Chancellor Somers," by Mr. Foss.

"The Origin and Early History of the Cathedral and Monasteries of Worcester," by the Rev. W. Stubbs.

"The Traces of History and Ethnology in the Local Names of Worcestershire," by the Rev. J. Earle.

"The Traces of the Scandinavian Language retained in Yorkshire," by Sir C. Anderson.

In the afternoon we made an excursion to Pershore, by way of Pinvin and Wire; the usual question of Saxon and Norman construction being made the subject of contention at Pinvin, without any new light being thrown on it.

In the evening, Mr. Parker read a paper "On Campden House and Town," in Worcestershire, and not the Camden-town of the metropolis; and then followed Mr. Freeman, who, in a lengthened and—must I say it?—dreary sermon, gave us an account of Simon de Montfort. Hume's history he described as rubbish, only believed in by heads of colleges and schoolmistresses. But, if Mr. Freeman intends to rewrite history, I should prefer that he did not read it, unless he could make it more interesting than this sample, which provoked the unmistakable and audible impatience of the audience.

On Thursday we proceeded to Evesham, to view the remains of the abbey. Thence we went to Buckland, a most picturesque and Alpine-like village. The church possesses many curious features,—a porch with a double gable, that nearest the aisle of the church still being surmounted with a cross and a sanctus bell-cot. In the rectory there is still to be seen the hall of the priests' house. We then went to the Church of Broadway, which is not now used for service; afterwards proceeded up the Broadway-hill, fully appreciating and enjoying the beautiful and commanding views to be had therefrom; till we came to Campden House, where the noble owner and Lady Campden received us, with the most polite attention on the part of his lordship, and the most winning grace from her ladyship and family. The house was restored by Pugin, and a chapel for the performance of the rites of the Roman Catholic Church added. At the altar are the remains of St. Victoria, brought direct from the catacombs at Rome. They were shown by the chaplain, who vouched for their authenticity; but those who viewed them at the same time as myself were of opinion, judging from the size of the bones, that St. Victoria must have been a very juvenile martyr, and must have been very precocious to suffer for her opinions at such an early age. Having partaken of the liberal and luxurious entertainment provided, we proceeded to the church at Campden, which is of late date. There are some well-preserved monuments of the early members of the Hickes and Noel families. That of the first viscount, by Stone, attracted particular attention, and called forth some remarks from Mr. Bloxham and others. In the evening there was a *conversazione* at the Museum.

On Friday morning there were the sectional meetings; and then, as usual with these congresses, came the great feature of attraction—Professor Willis on the Cathedral. He was, as on former occasions, eloquent, clear, logical, instructive, and, I must add, amusing,—an element too often neglected by our teachers; but it was evident that he had not in this cathedral the same object of inspiration as in others that he has illustrated; the frequent skinnings, patchings, repairings, and other alterations, rendered necessary by the decay of the stone of which it was built, having destroyed so many of those historical marks which it is his delight to discover and elucidate. These remarks are only meant to be comparative; for it is not for a moment to be supposed that the professor could be dull or uninteresting.

Between the lecture at the Guildhall, and the peripatetic illustration at the cathedral, Sir Edmund Lechmere, the high sheriff, entertained us at a sumptuous *déjeûner*.

In the evening, Mr. Lees read a paper on the Battle of Worcester. As a native or resident, he adopted all the traditions of the faithful and loyal city, and developed his views, founded thereon, with energy and enthusiasm. I was reminded of an anecdote that Douglas Jerrold used to tell of an Irish author, who took to writing on theology. Jerrold met him in Great Russell-street; and when asked where he was going, he replied—"To the Museum. Having written my book, I am now going to consult my authorities." Historical research, accumulation of evidence, impartial judgment, and that justice which ever attends the full development of truth, are placing Cromwell in a position that shows he may be viewed from a different point than that held by the Royalists.

On Saturday we had a healthful and exhilarating trip to Great Malvern; where the priory church was commented upon by Mr. Freeman. The peculiarity of this church is the addition of the Perpendicular style to the old Norman; which is so skilfully done as not to make the contrast too violent, or to diminish the general effect. After looking at Little Malvern Church, which contains many marks of the Roman Catholic influence in the neighbourhood, we proceeded to the top of the hill, known as the Hereford Beacon.

Some theories were propounded about this having been a British camp; and a marvellous story was told of a jewel of enormous value having been found in the neighbourhood; but as no greater authority could be given than an old local guide-book, the author of which took it from the tradition of the residents at Malvern; it did not create much belief in the minds of those who heard it. The exhilaration caused by the charming ascent, and the magnificence of the prospect, may have perhaps contributed to this; for I have often observed that cheerful spirits are a great antagonist to credulity. All thanks, then, to those who proposed and conducted this meeting in a county where, as our president remarked, "the beauties of art and nature are combined." By the influence of the latter, our judgments are rendered clearer for those objects which are the product of the former.

On Saturday evening Mr. Binns read a paper on the manufacture of porcelain in Worcester; but as it treated too much of the personal arrangements, proceedings, and history of the firm who are the manufacturers, it was not so interesting as it might have been.

Mr. Franks also offered some remarks on the general history of porcelain manufacture in England.

On Monday several papers of interest were read; and in the afternoon the members proceeded to Tewkesbury; but, as I gave you my impressions of this place when I wrote upon the meeting at Gloucester, it is not worth while repeating them here.

The Museum was very good, and illustrated many objects of local interest. The ancient Worcester porcelain was well represented; and there were many pictures of distinguished Worcestershire worthies, contributed by Lord Lyttelton, Sir John Packington, and others. There was also a fine collection of enamels. Indeed, the special taste and study of every one could be gratified with works of those arts to which they were attached. Among the general objects of interest was a very curious fan, painted in gonach, representing the drawing of a lottery in Guildhall. There were also some manuscripts by Esther Inglis, about whom there have been recently some inquiries in *Notes and Queries*.

Hospitality abounded, even after the regular period of the meeting, and invitations were given by Lord Dudley and Ward and Sir Thomas Winnington, which were accepted by many of the members.

The Worcester may be reckoned as one of the most successful meetings of the Institute; and the week spent in that city and its vicinity will be long remembered by its members. F. S. A.

BENZOL, ANILINE, MAUVE, AND MAGENTA.

An able and very interesting lecture on these subjects was delivered by Dr. A. W. Hofmann, F.R.S., and President of the Chemical Society, at the Royal Institution, in course of the last session; and we cannot pass it by without giving a few extracts from it in our columns.

The fact of the beautiful colouring matters known by the fanciful terms, mauve and magenta, being substances derived from coal, said the lecturer, must, I presume, be familiar to every one of you. These substances are obtained from a secondary product of coal, generated in the manufacture of gas; namely, coal-tar; a product long used for a variety of purposes; but which, only within the last few years, the researches of chemists have proved to be an inexhaustible mine of wealth and interest.

The starting point, then, for the production of mauve and magenta is the manufacture of coal gas by the distillation of coal, which ultimately is entirely resolved into gas and oily products; a non-volatile residue, the coke, remaining behind in the retort.

It is in the oily products, the so-called "coal-tar oil," that our interest is centred. To my mind this coal-tar oil is one of the most wonderful productions in the whole range of chemistry. The only coal derivatives which, in connexion with mauve and magenta, claim our attention, are benzol, phenol, and aniline.

The separation of the individual substances from the complex mixture called coal-tar oil appears, at the first glance, to present almost insurmountable obstacles. But the principles made use of for this purpose are very simple. The individual compounds contained in coal-tar oil may be separated in a great measure by distillation, their boiling points varying to a considerable extent. Benzol, phenol, and aniline may thus easily be separated.

Each of these three coal-tar oil constituents has received important applications in the arts and manufactures. Benzol is the most convenient solvent for caoutchouc: as an agent for removing oil and grease it has become an ordinary household article. Phenol, when treated with nitric acid, yields us a beautiful yellow dye, called by chemists carbazotic acid; but the practical interest attached to phenol you will more immediately appreciate if I tell you that this compound presents the greatest analogy with creosote; a substance, I am afraid, but too well known to most of us;—a considerable portion of the creosote of commerce being in fact simply phenol. Aniline, lastly, is the source of mauve and magenta.

The amount of aniline which exists in coal-tar is very limited: a preparation from this source upon a sufficiently large scale could never be attempted. Fortunately, chemists are in the possession of a series of processes by which aniline may be produced in any quantity. Benzol, the phenylated hydrogen, may readily be converted into aniline, the phenylated ammonia.

Very little is known regarding the chemical nature of mauve: its composition is not yet made out; and as a matter of course the process by which it is formed from aniline remains as yet perfectly unexplained.

Magenta is one of the fancy names given to the splendid crimson which is likewise generated from aniline by the action of oxidizing agents. This substance was first observed in purely scientific researches, and more especially in the action of tetrachloride of carbon upon aniline. To a French chemist, Mr. Verguin, the merit is due of having for the first time obtained this substance on a larger scale: he produced it by the action of tetrachloride of tin on aniline. Numerous other processes were subsequently suggested; among which treatment of aniline with chloride or nitrate of mercury, with arsenic acid, and many other substances, may be mentioned. Magenta, often called fuchsine, roseine, &c., soon became an article of large consumption. A great impetus to this new branch of industry was given in France by Messrs. Renard & Franc, who were the first to manufacture the new article on a commercial scale: in this country, very soon afterwards, Messrs. Simpson, Maude, & Nicholson engaged with great spirit in the manufacture of this splendid dye; the production of which has attained already colossal proportions. To Mr. E. C. Nicholson more especially belongs the credit of having developed this new industry to an unprecedented degree of perfection.

In all the processes which convert aniline into colouring matters, a considerable number of secondary products are generated, which it is rather difficult to separate from the principal product of the reaction. These difficulties have been most perfectly overcome by Mr. Nicholson, who has succeeded in obtaining magenta in a state of absolute purity. Chemists have thus been enabled to analyze this substance, and to lift, at all events, the corner of the veil which still covers the mysterious formation of the coloured derivatives of aniline.

In the pure state magenta is a fine crystalline, and, remarkably enough, a perfectly colourless, or only slightly tinted body, which is represented by the formula—

$$C_{20}H_{21}N_3O = C_{20}H_{19}N_3, H_2O.$$

Rosaniline (this is the name by which chemists designate the colourless body) is a base, or ammonia-derivative, which forms a series of splendid salts. With hydrochloric acid, for instance, it produces a beautifully-crystalline salt of the formula—

$$C_{20}H_{19}N_3, HCl.$$

It is in the state of saline combination that rosaniline acts as a crimson dye. Into this shallow porcelain dish I have thrown a few crystals of rosaniline, which at a distance you scarcely perceive. I now pour upon these crystals a small quantity of acetic acid; when on gently heating the dish the crimson colour instantaneously appears. But it is only in solution that even the salts of rosaniline are crimson-coloured: on slowly evaporating their solution, the red colour entirely vanishes, and a splendid green crystalline substance remains; presenting in an extraordinary manner the beautiful metallic lustre which distinguishes the wings of the rose-beetle. Together with all the products involved in the manufacture of aniline and aniline-dyes, my friend Mr. Nicholson has placed before you the finest series of rosaniline salts which has ever been produced; and, not content with this display, he was kind enough to send us a specimen of acetate of rosaniline, such as no mortal eye has ever seen before. The specimen may literally be called the crown of magenta.* Crowns are always expensive articles, and often are the cost and trouble of getting them greater than their actual value. This remark applies in a measure to the crown of magenta. For the benefit of those who are fond of big figures—and who is not a little afflicted with this weakness?—I may state that the crown was grown in a vessel containing not less than 8,000*l.* worth of magenta; the crown itself being worth upwards of 100*l.*

Having explained the several stages of transition through which coal has to pass before it becomes either mauve or magenta, it may be of some interest to you, continued Dr. Hofmann, to know the proportion which the finished dye bears to the coal from which it is derived. A set of specimens, for which I am likewise indebted to Mr. Nicholson, is most instructive in this respect. Observe, it commences with a large mass of coal, weighing not less than 100 lb.: the bottles which follow contain the coal-tar oil, naphtha, benzol, nitrobenzol, and aniline, obtainable in succession from 100 lb. of coal. Remark how they gradually diminish in size; and how small—I might almost say insignificant—appears the bulk of magenta finally obtained. But compare the bulk of wool which this minute quantity will dye. It approximates to the bulk of coal with which we started. This comparison evinces perhaps sufficiently the extraordinary tinctorial power which this class of dyes possesses; but a very simple experiment may possibly convey to you this idea even in a more impressive manner. The white paper which covers this large frame has been dusted over with a minute quantity of mauve: a second one is treated in a similar manner with magenta. The quantity of colouring matter is so small that the paper has retained its original white colour; but observe how it changes when I dash a beaker full of spirit against these squares: immediately the lovely purple of mauve is developed upon one of them, whilst the other one exhibits the dazzling crimson of magenta.

I shall now venture to dwell for a moment on the moral of the story which I have told you, though you may feel disposed to consider this story rather a highly-coloured one.

Mauve and magenta are essentially Royal Institution colours: the foundation of this new industry was laid in Albemarle-street. Benzol, which I have so repeatedly mentioned—benzol, which may be looked upon as the raw material, capable, under the influence of chemical agents, of assuming such wonderful shapes — benzol is the discovery of our great master, may I not add of our kind friend, Mr. Faraday. This volume, "The Philosophical Transactions for 1825," contains the description of his experiments. In 1825, thirty-seven years ago, the laboratory of the Royal Institution witnessed the birth of this remarkable body. Yesterday, under the auspices of Mr. Anderson, I invaded the same laboratory: a diligent search was made; and in my hand I hold the trophies of our expedition,—the original specimens of benzol which Mr. Faraday prepared. In thus reminding you of one of the early labours of Mr. Faraday — which, owing to the number and vastness of his subsequent discoveries, appears almost to have escaped from his memory like a tradition of years gone by,—I have opened a glorious page in the glorious history of the Royal Institution. Benzol has furnished us mauve and magenta; but it has done much more than this. Ever since chemistry became endowed with this wonderful body, benzol has been the carrier of many of the leading ideas in our science. In the hands of Mitscherlich, Zinin, Gerhardt, and Laurent; in the hands of Charles Mansfield—never to be forgotten by his friends,—and many others, benzol has been a powerful lever for the advancement of chemical science. Benzol and its derivatives form one of the most interesting chapters in organic chemistry; the progress of which is intimately allied with the history of this compound.

But what has the history of benzol to do with the moral of mauve and magenta? Well, ladies and gentlemen, ask Mr. Faraday: ask him *what was his object* in examining benzol, in 1825. I have, perhaps, no right to answer this question in Mr. Faraday's presence; but I venture to say that we owe his remarkable inquiry to *the pure*

* An immense aggregate of sparkling green octohedral crystals—some of them as much as an inch in diameter—deposited upon a large wire frame having the shape of an elegant crown, was here exhibited. This crown, we believe, is the one which has excited so much interest in the Palace of Art at Brompton.

delight he felt in the elaboration of truth. It was in the same spirit that his successors continued to work.

The moral of mauve and magenta is transparent enough. Whenever in future one of your chemical friends, full of enthusiasm, exhibits and explains to you his newly-discovered compound, you will not cool his noble ardour by asking him that most terrible of all questions, "What is its use? Will your compound bleach or dye? Will it shave? May it be used as a substitute for leather?" Let him quietly go on with his work. The dye, the lather, the leather will make their appearance in due time. Let him, I repeat it, perform his task. Let him indulge in the pursuit of truth—of truth pure and simple—of truth not for the sake of mauve, not for the sake of magenta: let him pursue truth for the sake of truth!

PLANT USED IN THE CONSTRUCTION OF THE EXHIBITION BUILDING.

Some idea of the magnitude of the undertaking so successfully completed by Messrs. Kelk & Lucas might be gathered from the immense mass of materials known as "builders' plant," used in the erection of the building, and which was sold by auction during the past week by Messrs. Fuller & Horsey; including 12,000 scaffold poles, 18,000 cords, 10,000 boards, 6,000 putlogs; 1,000 loads of timber, used principally for the construction of the great domes; 5 steam-engines, 20 tons rope falls, blocks, chains, smith's tools, &c., &c. There was a large attendance of buyers, including the representatives of many of our principal contractors. The poles fetched about five farthings per foot run.; the cords about 9s. per doz.; 12ft. boards, 12s. to 13s. per doz.; putlogs, 7s. 6d. to 9s. per doz.; timber, 40s. to 55s. per load; rope falls, 25s. to 36s. per cwt. The total amount of the sale was about 10,000*l.*

DEERHURST CHURCH, GLOUCESTERSHIRE.

This church having been under restoration since the beginning of 1861, was reopened on Tuesday, July 29th. It possesses great interest, from the fact of its being one of the oldest examples of English architecture. The beginning of the eighth century (from an inscription on a stone now preserved at Oxford, and discovered in the vicinity of the church) is found to have been the date of the founding of the Benedictine priory to which the church was attached. After having been destroyed by the Danes, it was rebuilt by Edward the Confessor; and the church was built by Odda, earl of Devon, in 1056. King Edward then made it an alien priory to the Abbey of St. Denis, in France. Though aisles, arcades, and other additions were subsequently made, it still remains an unusually perfect example of the architecture of 1050.

Elphege, archbishop of Canterbury, killed by the Danes in 1012, was a monk here.

The plan of the church consists of a western tower, nave, north and south aisles, and ruins of an eastern apse.

The lower part of the tower is of the Saxon period, chiefly built of herring-bone masonry. Within, a solid wall of masonry runs up through three stories, dividing the tower into two separate parts. There are numerous doors and windows in these rooms; and the eastern window on the first-floor, opening into the church, is drawn in Parker's "Glossary." The upper part of the tower is of the fourteenth century, partly covered by a wooden roof, which took the place of a stone spire blown down in 1666; and partly by a stone barrel-vault gabled on the outside.

The nave walls are of Saxon date, and were probably unbroken in their length, but are now pierced on either side by three beautiful First Pointed arches (the Abbey of St. Denis was about this time rebuilt, and it is probable that the same workmen executed both). Between the arcades and the east wall are two small doorways on each side; one of them is triangular-headed. These were discovered in the late restorations. Over them are large circular-headed windows, now opening into the aisles. Great care was taken in conducting the restoration to leave all the old features untouched; and in cleaning off the whitewash some remains of old wall-painting were found. The chancel arch is round, with rude capitals: it is now blocked up, and forms the east wall of the church. The foundations of an arch were discovered further westward; but no other trace of it now remains, except a few stones of the arch and columns, which were walled up in the doors of the chancel. The eastern arch was probably walled up at the time when the apse was destroyed; and the rood-screen stood on the site of the ruined western arch. The clerestory walls are partly of very early date, and are pierced by Third Pointed windows. The nave was covered by a very fine Third Pointed roof; but owing to its very dilapidated condition it has been almost entirely renewed. At the east end of the south aisle is a round arch, with a small door, called the "Prior's Door," now much mutilated, but which formerly communicated with the adjoining priory buildings, traces of which are yet to be seen in the adjacent farm-house. The side aisles are of Second and Third Pointed dates, with large four-light Second Pointed windows at the west end. The roof of the north aisle has been renewed, the west gallery taken down, and the whole area of the church reseated in oak, following the pattern of the old bench ends, of which many remain. The old Puritan arrangement of seats in the chancel has been preserved, viz., a seat running round the north, south, and *east* sides, with the communion-table in the centre. All the passages have been laid with Minton's tiles, in patterns. The pulpit is of oak, with carved panels, standing on a stone base, and was executed by Mr. Forsyth. In several of the windows were fragments of old glass: these have been collected and re-arranged by Mr. Miller, of London.

The whole of the works have been carried out under Mr. William Slater, by Messrs. Collins, Cullis, & James, of Tewkesbury.

INAUGURATION OF THE MYDDELTON STATUE, AT ISLINGTON.

On Saturday last the statue and drinking fountain, of which we some time since gave an engraving, were inaugurated at Islington, in honour of Sir Hugh Myddelton. The event caused considerable excitement in the parish. The Chancellor of the Exchequer took a leading part in the ceremonial.

The site of the statue and fountain is on Islington-green, a few yards from one of the entrances to the new Agricultural Hall. The figure of the knight, executed by the late Mr. Thomas, the sculptor, is 8 feet 6 inches in height. It is carved in white Sicilian marble; and represents Sir Hugh clothed in the costume of the latter portion of the sixteenth century, with badge and chain; holding in his left hand a scroll containing the plan of his great and useful work, labelled with the words "New River." The statue is placed upon a pedestal of grey Devonshire granite, on the front face of which is the inscription, "Sir Hugh Myddelton, born 1555, died 1631." The base beneath the pedestal is of Portland stone, and on the right and left of the pedestal are two seated figures of boys, partly draped, with hair entwined with bulrushes; and beneath them pitchers, from which the water pours into the basins. The figures and basins are of Sicilian marble. The whole stands upon a base of 17 feet by 7 feet, and will cost about 900*l.* The statue itself has been given by Sir S. M. Peto, and the rest has been provided for by subscription, the New River Company having given 50*l.* towards the cost. The memorial has been erected under the superintendence of Mr. Purves.

Mr. Gladstone, after declaring the fountain open, and drinking of it to the health of those present, delivered an address, in course of which he alluded to the difficulties which Sir Hugh Myddelton had to cope with. A most amusing passage in old Stowe's work, he remarked, describes in a few words the obstacles which Sir Hugh had to encounter. They were "danger, difficulty, impossibility;" that is pretty well, but it is not done yet: "detraction, contempt, scorn, derision, yea, and desperate despite." There was another difficulty, too, he must have had; but it would not have sounded so well among all those portentous fiendlike epithets: it was of much more prosaic character, and was what is commonly known in the present day as "want of capital." Sir Hugh Myddelton was, in point of fact, driven very hard. He therefore had to appeal to King James, and offer to share the profits with the Government of the day. When the work was completed, however, and the New River water was actually brought into London, as we learn from the same chronicler; instead of scorn and desperate despite, and all those other vile epithets which it was thought that poor Sir Hugh well merited; the New River was brought in amid huzzas, the firing of mortars, the ringing of bells, the beating of drums, and the blowing of trumpets. Of course, Sir Hugh Myddelton did not want the services and the huzzas of those men who were not ready to share with him his time of difficulties. What I have said about this model man, in respect to those qualities of character upon which so much of our country's greatness depends, may, I trust, be useful in exciting your interest, and lead you to inform yourselves respecting the qualities and career of that remarkable person to whom we are now met to do honour. Sir Morton Peto, who has presented you with this statue, is himself eminently a man of the age, and has occupied a forward and a prominent place in the enterprises of the day; and I think that he has been acting in this matter thoroughly in the spirit of his own character, when he caused this statue to be erected in the very prominent place in which it now stands. It is a thing somewhat new in the history of mankind to erect in public places statues of engineers.

Sir Morton Peto stated that he was greatly pleased to have been the means of erecting a statue to a great man in so public a position in the metropolis. Reference had been made by the Chancellor of the Exchequer to the admirable work of Mr. Smiles, "The Lives of the Engineers;" and that able writer stated, in the preface to his work, that he waited upon the late Robert Stephenson, and told him that he thought of commencing with the life of George Stephenson. He was advised, however, by his son Robert to commence with Sir Hugh Myddelton, "the first man who taught us what we should do in the way of material development: his was a fine character: present that as the opening picture of your work." The pleasure that he (Sir M. Peto) experienced in connexion with the proceedings of the day was somewhat clouded by the recollection of the death of the able artist by whom the statue had been designed and modelled. Mr. Thomas was a self-made man. The first time that he saw him was while carving a lion at a shop-front in Birminghim. Sir C. Barry afterwards saw and recognized his genius, and employed him on the decorations of the new Houses of Parliament. The Prince Consort became his patron. But the labour which he bestowed upon his great work—the majolica fountain at the Great Exhibition—laid him upon the bed of death. He could not look at the memory of the men whose names must be known and loved by all present—George and Robert Stephenson, the two Brunels, Locke, and others like them—without thinking how much we owed to them with respect to the advance of our country. It was only a century since the first canal in this country was cut. For all the earlier works of engineering we were indebted almost entirely to foreigners. But at the present moment, through the genius of these men, the public works of this country were not only the first in the world, but those men to whose names he had referred were identified with the progress of civilization and social progress in every part of the world.

ONE OF THE DANGEROUS TRADES ALLOWED IN THE METROPOLIS.

Notwithstanding that the law is now said to be sufficient for the suppression of dangerous trades within the thick population of the metropolis, accidents from firework manufactories and other explosive materials are still of frequent occurrence. The other day, between twelve and one o'clock, an explosion happened in Camden's Gardens, Three Colts-lane, Bethnal-green. All these names have a rural sound; but here all appearance of the country has vanished, and now houses, &c., cover the ground. Moreover, this "lucifer" manufactory was situate within a few yards of the Mile-end railway station, a place of large passenger traffic. The accounts state that there were a number of men and boys engaged in the dipping-room, where there was a large boiler used in drying the goods, which were lying in the several compartments of the building, when an explosion took place, blowing off the roof and sides of the room, and burying several men in the *débris*. By the exertions of the police and others the injured parties were extricated, and some of those most injured removed to the London Hospital. Fortunately no loss of life is reported; but the danger of such trades in situations like this is evident; and it seems extraordinary that it should be allowed. But the mischief did not end on this day; for, after the first explosion, temporary sheds were erected, we suppose for carrying on the same dangerous work, on the same spot, when another explosion took place in the *débris* of the former accident, scattering the sheds in all directions around the premises, and blowing two men to some distance. The greatest alarm was created; and crowds of people were with difficulty prevented from foolishly rushing to the spot.

PROPOSED NATIONAL MEMORIAL.

Some weeks ago we placed before our readers the pith of the report made by the Committee of Architects to the Queen's Committee. We now print it entire:—

"Royal Institute of British Architects,
Conduit-street, 5th June, 1862.

"Dear Sir Charles,—The committee appointed by the Queen 'to advise her Majesty on the subject of the Memorial to the Prince Consort' having requested us by a letter, dated 10th May, in obedience to a suggestion from her Majesty, to give an opinion as architects as to the best means of giving effect to her Majesty's wishes, we have the honour to state, that we have fully considered the matter referred to us, and beg to report as follows:—

In your personal communication with us at our first meeting, you brought under our notice various ideas on the subject referred to us, which had occurred to the committee; but, by your letter of the 17th May to Mr. Tite, you were good enough to state that the committee were desirous that 'we should all consider ourselves free to make any suggestion we pleased, without reference to any special site or object,' indicated to us in the conference to which we have adverted.

Being thus entirely free to present our opinion, we proceed, first, to take up the suggestions you offered, and which we believe were as follows:—

That the memorial to the Prince Consort should be erected in connexion with an institution of arts and sciences:—1st, as a distinct monument, in front of it, or in the centre of a quadrangle belonging to it; 2ndly, as a monument inside a hall of the building; or, 3rdly, as a wing, or some other portion of the building, to be hereafter completed, at the cost of the public.

These suggestions naturally appear to point out the South Kensington Museum and Schools of Art, because that establishment was founded under the auspices of his Royal Highness; it received his constant personal attention, and his desire was to see it become a large central college of science and art.

There are many reasons why the memorial might be erected with propriety and advantage in conjunction with such an institution, if the funds were already provided; but these questions arise:—viz., whether the nature and style of the memorial could be safely assumed before the plan and design of the building for the institution had been finally determined? and, 2ndly, whether it would be advisable to adopt such a memorial before the Government and the House of Commons had sanctioned and voted the necessary funds for the buildings?

Considering all the doubts which at present exist with reference to the permanent extension of the buildings at South Kensington, and the difficulties and delays which would arise in the event of a recommendation by the committee of such a project, it appears more desirable to erect the memorial, not as a part of, or in immediate connexion with, a very expensive edifice not yet determined upon, but as an independent monument in Hyde Park, on or near to the site of the Exhibition of 1851, or on some other more public and central site than South Kensington, according to the expectations which have been held out, and upon which many persons subscribed to the fund.

The memorial, if erected in conjunction with any large building or institution, would lose in individual grandeur and importance; it would be difficult to treat it otherwise than as a subordinate object even outside the building; and if placed within it would be seldom seen, and would not be the national monument immediately under the public eye, which most people are expecting.

The sum available for the memorial is supposed to amount to between 50,000*l.* and 60,000*l.*, which probably would not be more than sufficient for a work of art worthy of the nation, including the cost of forming a site to receive it.

Assuming, therefore, the propriety of erecting the memorial as 'a monument,' and that it cannot be a monolith obelisk, the forms which suggest themselves are,—1st, an obelisk in several stones; 2ndly, a column; 3rdly, a Gothic cross; 4thly, a large group or groups of sculpture; and 5thly, a building: a statue of the Prince Consort being, in any of these cases, the most prominent object.

Respecting these various kinds of memorial, the following considerations arise:—

1. As it appears a monolith cannot be obtained, there is no especial reason for adopting an obelisk, which, to be effective, must be on a very large scale, and, if so, it would be more conspicuous and important than the Prince's statue; and, further, an obelisk built up in several stones would only show an inferiority to the ancients.

2. The objections above stated to an obelisk apply almost equally to a column, or any erection of that description, except that on the summit of a column might be placed the statue. But in such a position the figure would not be better seen than the Duke of York or Lord Nelson on their columns, and statues so placed have not acquired much favour with the public.

3. The objections to an obelisk, a column, or any erection of that description, apply also to structures in any style of architecture which would assume either of those forms.

4. With reference to a memorial composed of one or several groups of sculpture, surmounted by a statue of the Prince, the following considerations arise:—If in the open air, considering the climate of this country, it must be of bronze; and if placed in Hyde Park, it must be upon a very large scale to be effective. We admit that bronze, in our climate, soon acquires a dark tone, injurious to the effect of a work of art; but we are inclined to believe that there may be a mixture of metals that would acquire an agreeable permanent colour. Among the finest monuments of modern times, that of Frederick the Great in Berlin, and of the Archduke Charles in Vienna, have hitherto retained a rich, lustrous colour; or, as in the case of the Greek horses in Venice, the statue of M. Aurelius in Rome, and other classic examples, gilding, in particular parts, and under certain conditions, might be resorted to.

Leaving for the moment these particular considerations, we proceed to point out the site which appears to us to be desirable for the monument itself, and the general mode of treatment we would recommend.

We think, then, that the proper site is to be found by drawing a line from south to north, through the centre of the Horticultural Gardens, crossing the Kensington-road; and on the north side of which the ground rises sufficiently to Rotten-row to give the elevation required. At that point an extent of nearly 1,200 feet may be obtained for entrances to the park, for terraces, fountains, flights of steps or inclines; and a depth (340 feet) sufficient for all purposes. In the centre of this area we would propose to place the memorial itself. If in bronze, this may be a group of statues, without a building; or, if in marble, with a building to protect them.

We attach a sketch plan to this Report, showing generally how this idea may be worked out, by which it will be seen that the area gained has the dimensions before stated of 1,200 feet from east to west, by 349 feet from north to south, in the centre. To obtain this we propose to straighten the main road, and to make another entrance and gates to the park at the east end of the area, opposite the Exhibition-road, corresponding with that recently made, opposite the end of Prince Albert's-road. The drive in the park and Rotten-row would both remain undisturbed.

The advantages gained by such a site are these:—It is at no great distance from the area occupied by the Exhibition Building of 1851, and is in immediate juxtaposition with the Horticultural Gardens—the result of His Royal Highness's own conception—thus forming a point of connexion between the two.

Having thus given our views of the site and character of the Prince Consort Memorial, we approach with much more diffidence the consideration of the question of some building to be erected, with a view to general usefulness, in order to carry into effect to a certain extent the frequently-expressed wishes of the Prince, and particularly to realize his views as stated in his address at the opening of the Horticultural Gardens.

It appears to us that, by the generosity of the nation, apart from the learned societies, science and art are provided for in the British Museum, the Museum in Jermyn-street, and the schools at South Kensington. What seems to be wanted is some spacious hall and its necessary adjuncts, as a place for general art meetings; or for such assemblies as are about to take place in London in connexion with social science and its kindred pursuits. We have nothing in London for such an object like the great halls of Liverpool, Leeds, and Manchester.

If these views are well founded, and would be received with public or national favour, we see no reason why the vacant ground at the back of the Horticultural Gardens, south of the Kensington road, as suggested by the Queen's Committee, should not be a fitting site for such a building.

Architecturally (and apart from general questions of expediency, upon which there doubtless exists a great variety of opinions), nothing could be happier, in our opinion, than to occupy the north side of the road with the Prince Consort memorial, and the other side with a grand central hall, having approaches to the hall itself, and as at the present moment to the Horticultural Gardens; thus effectually screening from view the back of the conservatory, and the unsightly objects at present existing.

The sketch plan before referred to will show how all this could be arranged; but we only propose a general scheme, because it appears to us to be our duty rather to submit suggestions and general advice, than to presume to present anything like a detailed proposition.

If our recommendation on the subject of the actual site for the memorial should meet with the approbation of her Majesty and the committee, the individual efforts of the architect and the sculptor might be invited for its realization, without attempting, at the present, to determine the final occupation of the vacant land on the south side of the road.

William Tite.
S. Smirke, R.A.
G. G. Scott, R.A.
J. Pennethorne.
T. L. Donaldson.
P. C. Hardwick.
D. Wyatt.

To Sir Charles Lock Eastlake,
President of the Royal Academy, &c., &c.

The Queen's Committee forwarded the above to her Majesty, with a report (their second), wherein they said:—

"General testimony, and, above all, his Royal Highness's own public declarations and acknowledged views, tend to prove that there was nothing he had more at heart than the establishment of a central institution for the promotion, in a largely useful sense, of science and art as applied to productive industry.

While the Prince was ever zealous in furthering the objects of charitable institutions, while he took an active part in endeavouring to improve both the moral and material condition of the poor, his great purpose—combining a wise philanthropy with patriotism—was to devise means for affording to the skilled labour of the industrial classes the advantages of a scientific and artistic education, and, in so doing, to promote their own social welfare, together with the commercial prosperity of the country."

"When we consider that the spacious site above mentioned was secured for this purpose by the Prince's foresight and decision; when we look at the useful and popular institutions which are already rising into importance in various parts of its area; and when we remember that the whole, with its present and prospective national benefits, is the consequence of that first Great Exhibition which owed its success to his Royal Highness's wisdom and perseverance, we cannot but feel that such visible results constitute in themselves a significant and appropriate memorial to the Prince Consort; and that a monumental expression and record of his Royal Highness's admirable qualities could not be better associated than with so characteristic an example of their fruits."

"We conceived that a hall forming 'a central point of union' where men of science and art could meet; where the results of their labours, with a view to the special purposes before indicated, could be communicated and discussed; and where deputies from affiliated societies throughout the United Kingdom could occasionally confer with the metropolitan authorities, might be fitly recommended as marking, with the monument, the general object of the institutions in their vicinity. We were the more induced to come to this conclusion, as establishments for special purposes connected with industrial education could hardly be proposed for a central situation. A hall, on the other hand, would, from its general character, harmonize with every kind of institution; and, while fitly occupying such a position, might, at the same time, form the commencement of buildings to be hereafter erected for more definite purposes.

Having pointed out to the Committee of Architects this ground as a fit site for the proposed hall, we left the further consideration of the question in their hands. It was open to them to recommend that the monument should be in some part of the hall itself; or in the open space in front of it, between the hall and the road; or in Hyde Park, in an area corresponding in its central line with that of the actual and proposed buildings opposite.

Without entering into details requiring future consideration, we are prepared to submit our opinion that the Committee of Architects have come to a judicious decision on this part of the question; nor can we hesitate to express our satisfaction with a result which appears to fulfil more than one important condition. By being placed in the Park, the monument has a national character; while its position in relation to the estate sufficiently indicates the connexion which we had regarded as an essential part of our general plan.

Had the monument been placed on the south side of the Kensington-road, it would have been so near the hall as to be overpowered by it; while, by being within the estate, it would have lost something of its public importance. The latter objection would have been applicable had it been proposed to place the statues within the building. We conceive, however, that that objection would not extend to placing within the hall a marble statue of the Prince, distinguished in its composition from the statue on the monument itself.

The hall, besides its special use, would, with its corresponding lateral approaches to the Horticultural Gardens, constitute the principal front to the whole estate. It would also, on many accounts, be an essential accompaniment to the opposite monument, by completing the connexion between it and the institutions which now exist, or may hereafter be established near it. Still, we are aware that its erection, as part of the proposed scheme, must depend on the amount which may be contributed. We can, therefore, at this moment do no more than express our earnest hope that sufficient funds may be provided to ensure the completion of the hall."

"In humbly submitting this our report to your Majesty, we beg leave to state that, should the scheme we have indicated meet with your Majesty's approval, we propose, in further fulfilment of your Majesty's wishes, to invite a certain number of architects to furnish designs for the general arrangement of the monument—as regards its height, magnitude, and architectural elements,—and of the surrounding area. The general design which might, with your Majesty's sanction, be selected, would at the same time be open to subsequent modifications in its details to suit the conceptions of the sculptors who, in conjunction with the architect ultimately chosen, would be commissioned to complete the work."

The report, of which the above are paragraphs, is signed—

"Derby.
Clarendon.
William Cubitt.
C. L. Eastlake."

The following is her Majesty's reply:—

"*Osborne, July 18th*, 1862.

"My dear Sir Charles,—The Queen desires me to acknowledge, through you, the receipt of the further Report of the Committee her Majesty had asked to advise her on the subject of the proposed National Monument to the Prince Consort.

Knowing the importance attached by the Prince to the establishment of some central institution for the promotion of scientific and artistic education, the Queen is much pleased by your recommendation that the personal monument to his Royal Highness should be in immediate connexion with buildings appropriated to that object.

Your report, therefore, suggesting the erection of a central hall as the commencement of such buildings, and in connexion with the personal

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monument to be placed directly opposite to it in Hyde Park, meets with her Majesty's entire and cordial approval; and should public support afford the means of giving effect to your recommendation, it will be far from being a matter of regret to her Majesty that the difficulties in the way of the original suggestion of an obelisk, as the principal feature of the proposed monument, were such as to lead you to counsel the abandonment of that idea.

Few things, indeed, could now make the Queen more happy than to be allowed to witness the realization of some of her beloved husband's noble plans for the benefit of mankind. She knows how constantly he regretted that much of the good which the many institutions founded for the advancement of science and art, in some one or other of their branches, were calculated to effect, was lost by their isolation and want of connexion with each other.

But, though strongly convinced of the advantage that would follow their being brought together, he was also strongly impressed with the importance of not interfering in any way with their free and voluntary action; believing that their union, to be productive of good, must be an unforced union, brought about by a generally felt opinion of its necessity, and meeting with public support.

In fact, it was to public, as distinguished from Government or Parliamentary, support that he always looked for the means of giving effect to his plans.

He was, therefore, content to wait with patience till the conviction should have forced itself on the public mind, as it had long done on his own, of the expediency of giving to those bodies some general organization, or point of union, which should enable them mutually to assist each other in promoting their several objects; while it should leave untouched their power of independent action, and extend rather than limit their sphere of individual usefulness.

It would have gratified the Prince much, therefore, as it is now a source of some consolation to the Queen, to find that one of his great ideas for the good of the world (for his views were by no means limited to this country) forms the basis of the recommendation contained in your report; and her Majesty can have no dearer wish on this subject than that the estate purchased, as you say, by his 'judicious counsel' and wise 'foresight and decision,' should be devoted to such a purpose; that the establishments actually upon it, as well as those that may be expected to come there, should be considered as a whole,—to form one institution,—one great and comprehensive institution,—having for its object (to use the Prince's own words, as quoted by the committee) 'to increase the means of industrial education, and extend the influence of science and art upon productive industry.'

For such an institution, some appropriate title connected with the Prince's name will doubtless hereafter be found; while, from its object, and still more from the benefits which the Queen hopes would follow the development of this idea, it would be fitly connected with the personal monument, and would, itself, form the most lasting and worthy memorial of the Prince's untiring and unselfish exertions for the general good.

I remain, dear Sir Charles,
Yours very sincerely,
C. L. Eastlake, &c." C. Grey."

Since the receipt of this, the Queen's Committee have invited the seven architects whose names are attached to the Architects' Report given above, with the addition of Mr. Charles Barry and Mr. E. M. Barry, to submit designs, and have sent to them the following instructions:—

"1. A design for the memorial itself, adapted to the site indicated on the plan; and proportioned, in its height and magnitude, to the position it will occupy, and to the buildings which may hereafter be erected on the south side of the public road.

These general requisites being compatible with a variety of designs, the committee are unwilling to prescribe any particular kind of monument. They conceive, however, that as her Majesty's pleasure has, to a certain extent, been made known, and will at all times be consulted, it will be advisable for those who propose to submit designs to refer to the various letters from General Grey, dated respectively the 19th of February, the 19th of April, and the 18th of July, in which her Majesty's views are expressed.

Another important consideration will be the amount of the fund which may be available for the cost of the memorial itself; for that of the proposed straightening of the public road; for the arrangement of the area in Hyde Park, with its decorations; and, if possible, for the hall on the south side of the road.

The design for the architectural portion of the memorial should be regarded chiefly as a means of insuring the most effective arrangement of the sculpture which is to complete it. The position, dimensions, and material of the statues may be indicated without anticipating or interfering with the conceptions of the sculptors. It is conceived that this system of combined invention, so common among the architects and sculptors of antiquity when employed on temples and mausoleums, is no less desirable and practicable when the object is to provide an architectural base for groups of sculpture, surmounted by the statue which is required to be conspicuous.

2. As the site for the memorial indicated in the accompanying plan leaves the form and character of the monument undetermined, so the arrangement of the ornamented area in Hyde Park is merely intended to show the extent proposed to be so treated. Each architect is, therefore, free either to adopt the arrangement indicated, or to vary it as he pleases; care being taken to maintain the connexion expressed in the plan between the memorial and the proposed buildings on the south side of the public road.

A design will be required for the fountains marked on the plan. The precise site, as well as the dimensions, are not to be considered as strictly defined; more especially as it may be thought preferable that the line from east to west in which the fountains are placed should be parallel with the southern boundary of the area. It will be necessary to ascertain what facilities exist, or can be provided, for supplying the fountains with water; the requisite details for carrying this part of the scheme into execution being practically investigated.

3. It will be desirable that the general plan of the hall (about 150 feet by 80 feet) should be defined, and that a plan of the buildings which may be ultimately erected near it should be indicated; the lateral approaches to the garden of the Horticultural Society being preserved. It is suggested that the hall might be placed nearer to the public road, the buildings next it on the architect's plan being also brought forward, and, should it be thought desirable, even nearer to the road than the hall itself. A reference to the actual state of the ground on this side of the road, as seen in the plan (marked B) which accompanies the architect's plan, will show that, whatever prospective arrangements may be devised, it is only possible at present to deal with the unoccupied central portion of that ground.

A sketch elevation will be required for the hall, but not for the contiguous buildings, the indication of which is, however, left to the discretion of the architects. A copy of a correspondence between the Memorial Committee and the Commissioners for the Exhibition of 1851, respecting the site and dimensions of the proposed hall, is enclosed.

4. The designs generally will consist, according to the subjects treated, of plan alone, or of plan and elevation, sections being added when necessary. Plans showing the general arrangement should be drawn to a scale of 2½ inches to 100 feet. Detailed designs for the memorial should be drawn to a scale of 1 inch to 5 feet, the scale of other drawings being left to the choice of the architects.

5. Separate estimates will be required for the memorial (with an approximate estimate for the sculpture), for the fountains, for the general arrangement of the ground, for the straightening of the public road, and for the railings and entrance-gates. A general estimate will also be required for the hall, including the levelling of the ground, and the railings and entrance-gates on the south side of the road."

The designs are to be confined to drawings; no models will be required. If a design be approved by her Majesty, the architect offering it will be commissioned to execute the work in conjunction with the sculptor or sculptors who may be selected. The sum of one hundred guineas will be placed at the disposal of each of the architects whose design may not be chosen. The designs will be required to be ready by the 1st December next; and it is not proposed that they shall be publicly exhibited by the committee. It is understood that the committee will not invite other designs, except in the event of no one of those by the architects now selected being considered satisfactory. It has been stated that Mr. Tite and Mr. Smirke have declined competing: and here the matter now rests.

HEXHAM ABBEY CHURCH.

A meeting of the Architectural and Archæological Society of Durham was held last week in the Abbey Church, when Mr. F. R. Wilson read a paper on the history and condition of that building. We take some passages of the paper:—

It would have been well for Hexham if the Archæological and Architectural Society of Durham and Northumberland had existed a hundred years ago—even fifty years ago;—I may add, even ten years ago. For who may tell how much of this sacred fabric has been suffered to decay, or how much has been destroyed, through disregard. The ancient bells alone were an inheritance. A description handed down to us states, with tantalizing minuteness, that they were all inscribed with Latin legends; that three of them bore date 1404; and that three belonged to a much earlier period. But their antiquity was an offence a century since. So the Hexham men, 1742, melted them down, silenced their silver voices for ever, and cast the metal afresh. In this way many gems have been lost: they were deemed of no account; all for want of a due appreciation of the labours of those who have gone before us. Not but that, as it is, there is plenty of work for us still to perform. We have to make it apparent to the popular mind that there is something beyond price, beyond measure, beyond words, in the work of the men whose lives—one wrought with another—form the history of the country; and that it is imperative we should leave to posterity all that has been left to us; making, for our own time, what additions we may to the store, but taking nothing unnecessarily from it. We have each to see in our respective spheres of observation that no more bells are melted down; no more shrines with altar paintings bartered as old materials; no more Lady chapels razed to the ground; no more monuments used for drainage purposes; no more ventilating trenches cut through layers of coffins and skeletons; nor any other work that the reverence, the industry, the intelligence of former ages upreared, laid waste. The wealth of a nation is affected by the simple difference between accumulations and destructions. Let us now pay tribute to the labour, the love, the artist-feeling bestowed upon the Saxon edifice first built upon this site. Let us picture Wilfred, the founder, crossing the sea,—the gannet's bath, as it is called in the old Saxon poems,—as though scornful of sea-storms. Let us picture him travelling through France, staying in the royal village of Compiègne to be consecrated bishop—brother bishops, tonsured and robed, carrying him in a chair of gold, singing hymns of joy; next sojourning at Rome, ever gleaning wealth of ideas to expend upon the edifices he hoped to rear in his own country to the glory of God; and then raised to great eminence and power, by virtue of his rigorous piety and great learning; rearing here at Saxon Hexham, Hagulstad, so stately a building, that Queen Ermenburga saw the regal splendours of her husband, Egfad, outshone. With this context, with this view of a refined and elevated life threading the rude times when Saxon subjects were "mighty war-smiths, and Saxon kings were bracelet-givers to heroes," we should look upon the Saxon relics which are still ours. Thereupon we may raise up for ourselves a mind-picture of the structure after Bishop Acca, the confidential friend of the Venerable Bede, had collected the remains of saints from all parts of Europe, and placed them in shrines between every pillar of the edifice, and had enriched the services with costly altar vessels, rich vestments, and with the voices of trained singers;—when it was pronounced finer than any other building on this side of the Alps. Richard of Hexham describes the church as having had three distinct stories supported by columns, besides the crypt; and states that the capitals of the columns, the arch of the sanctuary, and the walls themselves, were ornamented with sculpture and paintings. We may conclude from his account that it possessed both a triforium and clerestory; as he makes further mention of curious galleries in which innumerable multitudes might stand around the body of the church and yet remain unseen by those within. Of this structure and of these times we have but the crypt, the fridstool, a few sculptured stones, and a vase full of stycas! The word crypt, crute, croute, grotte, is derived from the Greek κρυπτειν (*cryptein*) to hide. The first crypts, or holy grottoes, were cut out of the rock, or masoned underground, for the purpose of concealing the tombs of martyrs from profane eyes. As Christianity gained ground, churches were built over many of these—as at St. Peter's, Rome, which was erected over the tomb of St. Peter. The fridstool, when associated with the Saxon fugitives who, a thousand years ago, fled to it for sanctuary, is of rare interest. Moses was commanded to appoint six cities of refuge whither a man should flee who inadvertently killed his fellow; and the Christian church extended the same immunity to all offenders. The fridstool was the centre point of the privilege of sanctuary, which extended for a mile around it. We have to look back through so many centuries at the Saxon cathedral that we can see it but faintly. All is pale-tinted and indistinct, like the ink of ancient chronicles; but the fridstool and the crypt are, like the illuminations thereof, fraught with colour and forms that were once aglow with life and beauty. Mr. Wilson then proceeded to give a succinct account of the vicissitudes of the church and monastery of Hexham, from its foundation by Wilfrid, in 673, to the present time. Wilfrid, he said, died at his monastery, at Oundle, near Staniford, in the year 709, and was succeeded by Acca, who flourished till 740. Two stone crosses—one of which had been erected at the head of Acca's grave, and the other at the foot—were at present in the possession of Mr. Fairless, of Hexham, and were said to be specimens of wondrous art. This Saxon building was destroyed by the Danes in 875, the only portion now remaining of the original structure being the crypt. In due time, however—in the reign of Henry I.—a certain Thomas, Archbishop of York, looked upon the

remains of the church of Wilfrid, and conceived the resolution to restore "the wonderful work of wall stones" of the Saxon prelate to its former splendour. It was his work upon which they now gazed. The position of the crypt marked the position of the Saxon chancel: the choir was thrown out still further eastwards; and transepts were added. As to modern repairs, he said, the seal of doom was set upon the Perpendicular Lady Chapel. The shrines, the fridstool, the oaken stalls were all dismissed indiscriminately with the galleries that really needed removal. Even the ancient monuments—Early English tomb-slabs—were turned out into the churchyard. It was in the course of the removal of the Ogle shrine that a fifteenth-century altar painting was discovered. The screen work had been covered with green baize, and this work of early art was enshrouded within. The *Builder*, the *Ecclesiologist*, the *Critic*, have censured the clean sweep thus made in the severest terms. The Bishop of Durham, when he presided at the reopening of the church on the 10th October, 1860, looked on a sorrier spectacle of ravage than had been since the pillaging Scots of 1296 had left the fabric engulfed in hissing flame and lurid smoke. We must admit that more discretion might have been used. You will admit, too, I hope, that I spoke advisedly when I said it would have been well for Hexham if the Archæological and Architectural Society of Durham and Northumberland had existed even ten years ago.

PRIZES FOR DECORATIVE PAINTING.

THE PAINTERS' COMPANY.

We have before now mentioned the competitions in painting work opened by the Painters' Company, in their hall. This year they determined to give their prizes to works in the Palace of Art and Industry. In accordance with this arrangement, the Master of the Company (Mr. Comfort), and Messrs. Laing, Cobbett, & Barker (members of the Court of Assistants), on the part of the Company, and Messrs. Taylor (of Clement's-lane) and Munro (of Islington) on the part of the trade, examined Class 30, and awarded the following prizes:—

For Graining, a silver medal to Mr. J. Kensett, for No. 5,902. A bronze medal to Mr. W. A. Grant, for No. 5,888.

For Marbling, a silver medal to Mr. Read, for No. 5,917. A silver medal to Mr. I. Bradley, for No. 5,672, for tables painted in imitation of Devonshire marbles. A bronze medal to Messrs. Maslin, for No. 5,908.

For Writing, a bronze medal to Mr. W. Pitman, for the writing in No. 5,914.

For Decoration, a silver medal to Mr. J. L. Coulton, for an allegorical arabesque decoration, No. 5,883. A bronze medal to Mr. J. H. Earle, for a drawing-room decoration, No. 5,885. A certificate of merit to Mr. G. Lainson, for pilasters painted on satin, No. 5,904.

They also make honourable mention of No. 5,918 by J. & J. Rogers; and of No. 5,690 by Messrs. Cox & Co., the writing on the altar-piece; but as the principle of the Company is to give the prize to the actual performer of the work, they could not make an award, not knowing the name of the workers.

PHOTOGRAPHS FROM THE EAST.

Mr. Francis Bedford's photographic pictures taken during the Tour in the East, in which, by command, he accompanied his Royal Highness the Prince of Wales, may now be seen in the German Gallery, New Bond-street. Egypt; the Holy Land and Syria; Constantinople and Athens, are the three headings under which they are placed, and will be published for the convenience of purchasers. A descriptive catalogue accompanies them. Jerusalem is shown under several aspects. Of Hebron, one of the oldest cities in existence, where Abraham and Jacob lie buried, there are two views. There is a smaller contribution to our knowledge of interiors in Jerusalem, and to architectural knowledge generally, than is desirable. Of Baalbec and its ruins, the views are particularly interesting and beautiful. There is a general view of the ruins taken from the south-west, and showing the ruins of the two great temples; the six lofty columns on the south side of the Temple of the Sun, and the Temple of Jupiter, against the south wall of which leans a displaced column. At the extreme left of the picture may be seen the large stones in the western wall of the foundations of the Temple of the Sun.

Mounting to the platform of the Temple of the Sun, and taking our position at the western end, we have, looking towards the interior of the ruins, the six still erect columns of the Temple of the Sun; and behind them, on its lower platform, the Temple of Jupiter. In this view we can see plainly the joints of the three portions of which each shaft is composed, the beautiful sculpture of the Corinthian capitals, and the immense size of the stones of the entablature, reaching in single blocks from column to column.

A view of the north-west angle of the outer wall of the Temple of the Sun, shows the stones, from which the Great Temple derived the Greek name by which it was long known of Trilithon, or three-stoned. These wonderful stones are of the lengths, severally, of 64 feet, 63 feet 8 inches, and 63 feet: together, 190 feet 8 inches. They are of an uniform height of about 13 feet, and about the same in thickness. These stones are above 20 feet from the ground, and would appear to have been brought from quarries about half a mile distant. How they were transported from their ancient bed and raised to their present elevation it is difficult to conceive. In this quarry still lies, hewn, but not quite detached, a similar block, but even of greater dimensions, its length being 68 feet, and its height and breadth 14 feet.

The great doorway of the Temple of Jupiter, of which a view is given, must have been, when perfect, one of the finest doorways in the world. It is about 42 feet high, and 22 feet wide. Round it runs a border of foliage, fruit, and flowers, beautifully carved in bold relief. The lintel was composed of three large stones, and was entire until 1759, when the earthquake already referred to so loosened the stones, that the centre one sank down to its present position. On the under surface of this centre stone, but scarcely perceptible in the photograph, is the great figure of a crested eagle, supposed to be the Oriental eagle, sacred to the sun. The critical position of the suspended stone of the lintel is more clearly seen in a view of the interior of the Temple.

THE MEAN CALLED THE GOLDEN AND IMMUTABLE.

The following is a calculus of harmonic proportion applicable to political, ethical, and æsthetical science:—

Let A B be any given quantity, and C D any other given quantity greater than A B. Take from C D a quantity C E, which shall be to A B as A B : C D. Then any other ratio that cannot be represented by A B : C D will be C F = A B, and some quantity less than C F to A B. Therefore, all the possible ratios of two quantities lie between and include equality and greatest difference.

Equality and greatest difference, then, are the two extremes of quantitative relation. We know by experience that neither equality nor extreme difference is pleasing; therefore the point of harmony must lie between them. What, then, would probably be the best or harmonic relation between two quantities? Ans. 1 : 2; for there are as many varying ratios between one and equality with two as there are between one and extreme difference with two. 1 : 2 is the mean or average of all the ratios of two quantities.

CHRISTIAN PRECEPTS.

"Let your *moderation* be known unto all men." "He that striveth for the mastery is *temperate* in all things."

Experience in reference to the Celestial Mechanics.—The planet is temporarily drawn from its orbit (its slowly varying orbit), but forthwith returns to it, to deviate presently as much the other way, while the varying orbit accommodates and adjusts itself to the *average* of these excursions on either side of it, and thus continues to present, for a succession of indefinite ages, a kind of *medium* picture of all the planet has been doing in their lapse, in which the expression and character are preserved, but the individual features are merged and lost.

The greatest departure from the *mean* axis of any planetary orbit yet recognized by theory or observation (that of the orbit of Saturn disturbed by Jupiter) does not amount to a thousandth part of its length.

Experience in reference to Time.—From such comparisons, Laplace has concluded that the sidereal day has not changed by so much as one-hundredth of a second since the time of Hipparchus. *The mean* sidereal day, therefore, possesses in perfection the essential quality of a standard unit, — that of complete invariability. The same is true of the *mean* sidereal year, if estimated on an average sufficiently large to compensate the minute fluctuations arising from the periodical variations of the major axis of the earth's orbit due to planetary perturbation.

Experience regarding Climate and Temperature.—The *temperate* zones are most favourable to civilization: the *mean* temperature is most salutary. From 1816 to 1836, the *mean* annual height of the barometer in Paris did not vary so much as the twelve-hundredth of an inch.

Experience regarding Politics.—Those states are the most contented, prosperous, and permanent, which have *moderate* governments.

Experience in regard to Ethics.—Virtue lies in the *mean* between opposite qualities. Thus, liberality is a *mean* between parsimoniousness and extravagance, &c.

Experience regarding Æsthetics.—The ratio 1 : 2 is frequently found in the proportions of Classical architecture; the *middle, half*, or *neutral* tint, with regard to light and shade and colours. Ideal beauty lies in the *mean*; for if it did not, it would consist in excess or defect, which is absurd. 1 : 2 is the relation of the limits of the octave in music: from 1 to 2 is a *tenor* space of an infinite series of vibrations. The discovery of Mr. Piesse in reference to a gamut of scents brings these also to proportional relations.

I have forwarded you this abstract of a work in progress, as I have been informed that the physical theory broached in the paper read at the Antwerp Art Congress; in your columns at various times; and in the book entitled "Christian Idealism," has excited some attention on the Continent.

W. Cave Thomas.

THE COST OF A RAILWAY ACCIDENT.

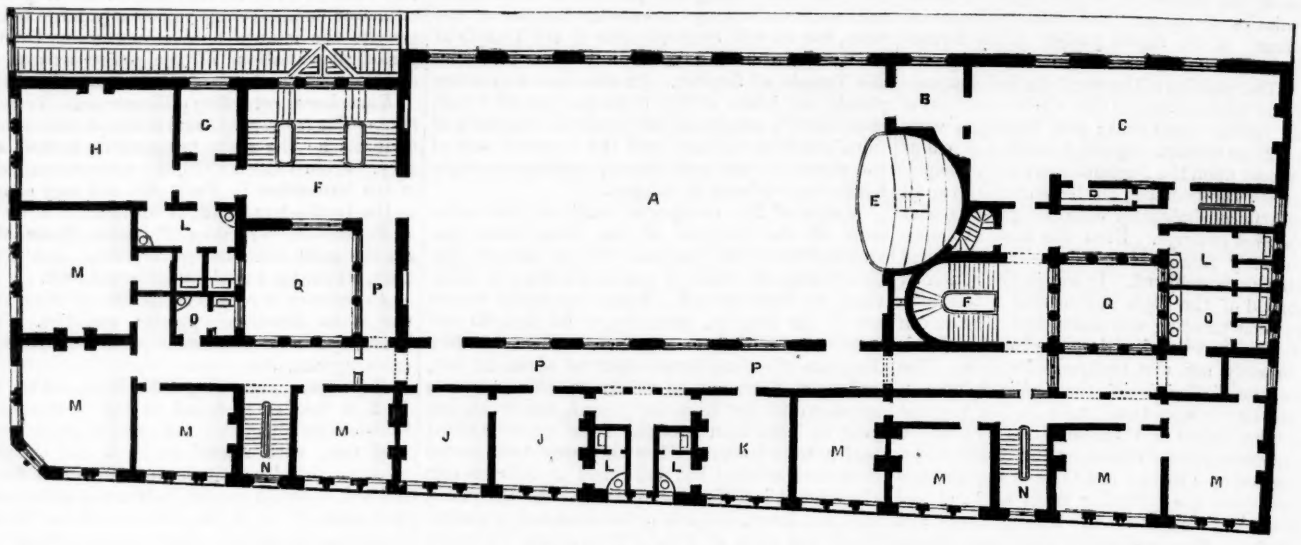
At a recent meeting of the shareholders of the London, Brighton, and South Coast Railway, in reply to a question respecting the amount of loss which had arisen to the company in consequence of the accident in the Clayton Tunnel, the chairman said that, as regarded this unfortunate affair, 11,000*l.* had been paid when the previous half-year's report was published; and in the present report 6,000*l.* was charged in respect of the accident; and a similar sum would be placed to the debit of the present half year. The total cost, therefore, might be said to be 24,000*l.* This, without taking into account the loss of life and other damage, ought to teach the necessity for not sparing the necessary expense in the employment of competent persons in connexion with railways, and using the care which is required to prevent such sad events.

QUESTION OF OBSCURING LIGHTS.

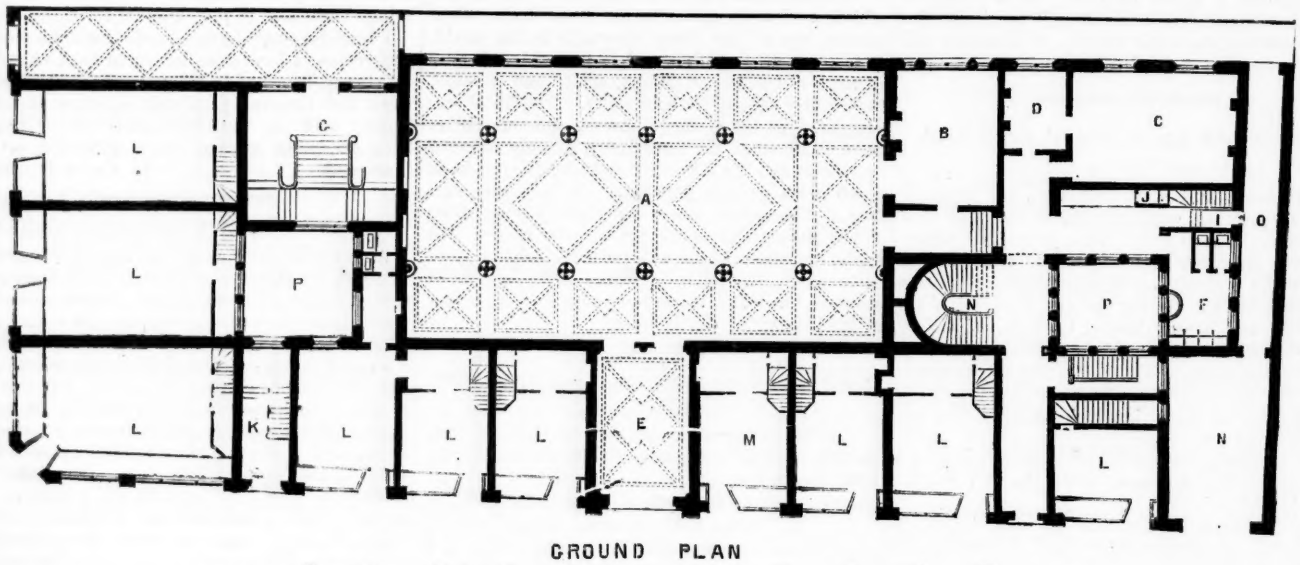
In the Vice-Chancellor's Court, on Monday, the cause of Gale *v.* Abbot came on for rehearing. The bill was originally filed for the purpose of obtaining an injunction to restrain the defendant from obscuring his ancient lights. The plaintiff was the lessee of certain premises in Holborn, in which was carried on the business of a curiosity dealer. In 1859, the defendant, who is the keeper of the Kent Tavern, in Brownlow-street, built at the back of defendant's premises a new larder. Subsequently the plaintiff, being compelled to pull down a wall which was dangerous, discovered the larder, and complained of it as darkening his ancient lights. Some negotiation took place, which was protracted a considerable time, until at length the plaintiff filed this bill. The main question appeared to be whether the plaintiff had lost his right by acquiescence. Mr. Bailey and Mr. C. Barker appeared for the plaintiff. Mr. Glasse and Mr. Pendergast appeared for the defendant. The Vice-Chancellor said he thought the plaintiff had established his right, and granted an injunction with costs.

BIRMINGHAM EXCHANGE.

In our present number we give a view and plans of the two principal floors of the New Exchange Buildings about to be erected in Birmingham, from the designs of Mr. Edward Holmes, of that town. The site selected by the directors is the finest in the borough, and adjoins the Free Grammar School, which was erected from the designs of the late Sir Charles Barry. It has a frontage of 186 feet towards Stephenson-place, the main thoroughfare to the Central Railway Station, and 63 feet towards New-street. As it is probable that the spare land between the Free Grammar School and the rear of the Exchange Buildings will never be built upon, the latter elevation will form a third front visible from New-



ONE PAIR FLOOR



GROUND PLAN

SCALE 10 0 10 20 30 40 50 60 70 80 90 FEET

EXCHANGE BUILDINGS, BIRMINGHAM.

street. The principal elevation fronts Stephenson-place, in which is situate the entrance to the Exchange; that to the Assembly-room being in New-street. On either side the Exchange entrance are shops, separate entrances to suites of offices, and a staircase on the lower side to the dining and refreshment rooms. This entrance also communicates with the Exchange, the Chamber of Commerce, and offices in connexion with it. The entrance to the Exchange being centrally situate, a tower, 100 feet high, is introduced, and the New-street front and corresponding end in Stephenson-place are a story higher than the intermediate parts. The design will be executed in stone and white brick facings, with the free use of coloured stone and brick, in bands, strings, arches, and cornices. Coloured stone will also be sparingly introduced in the detached columns of the windows. The roofs will be covered with slates, in bands and patterns. With the exception of dining-rooms, kitchens, &c., under the shops facing New-street, vaults and warehouse room will occupy the whole of the basement, which is one story deep.

The Exchange is 70 feet long, 40 feet wide, and 23 feet high, and is lighted by a range of six wide and lofty traceried windows. Two rows of small iron clustered columns, with wrought-iron arches and foliated spandrels, run the length of the Exchange, and carry the beams of the Assembly-room floor. A committee-room, 20 feet by 15 feet, is provided, adjoining the Exchange, with a private entrance from the lobby. The Chamber of Commerce is in close proximity to the Exchange, and situate on the ground-floor. The size of the room is about 25 feet by 16 feet: there is a small ante-room adjoining. The Assembly-room, 70 feet by 40 feet, and 28 feet high, is on the first-floor, over the Exchange. This room is lighted by a range of three-light windows, six in number. The refreshment or supper room is entered from the Assembly-room, and also from the lobby, which communicates with the corridor: it is 46 feet long and 20 feet wide. Provisions will be delivered to this room by a lift, which serves also for dining and other rooms. The dining-room, which is immediately below the refreshment-room, may also be used for the purpose of a refreshment or supper room, upon the occasion of balls. It is on the mezzonine floor, and the same size as the refreshment-room. In connexion with this department are spacious coffee and smoking rooms. The kitchen and other culinary offices are arranged on the upper floor, over the dining-rooms. The lift is connected with each floor, from the basement. Cellaring is also provided for coal, beer, and wine, in the basement; and a residence for the superintendent of this department, on the upper floor.

A room, 38 feet by 32 feet 6 inches, and 21 feet high, with dressing and ante-rooms attached, for the convenience of masonic meetings, is on the third-floor, fronting New-street. Care has been taken to keep this portion as private as possible. It is approached by the assembly-room stairs and entrance from New-street. Upon the occasion of grand masonic meetings and dinners, immediate access may be gained to the assembly or dining-room, by the stairs and corridor round the assembly-room, without coming in contact or interfering with the occupants of the offices. The hall-keeper's residence is arranged in the central tower. The remaining space for disposal, after arranging the principal rooms on the various floors, is divided into offices of convenient sizes and suites. Each office will be lighted by three large sash windows. All the rooms and offices on the various floors have water-closets, wash-stands, and urinals attached. Those in connexion with the Exchange are approached from the end door of the Exchange opening on to the lobby. Access is gained to the various floors by stone staircases, in which winders at the angles have been carefully avoided. The Exchange and assembly-room will be heated by Haden's hot-air apparatus. All the offices and smaller rooms will be warmed by fires. The floor of the Exchange and entrance will be laid with encaustic and plain tiles, and bands of stone upon brick arches. Our readers will doubtless agree with us that by this building, occupying as it will a most conspicuous site, an important feature will be added, both in an architectural and commercial sense, to the metropolis of the Midland Counties.

REFERENCES.

One-Pair Floor.

A. Assembly-room.
B. Lobby.
C. Refreshment-room.
D. Serving-room.
E. Orchestra.
FF. Staircases.
G. Hats and Cloaks.
H. Ante or Card Room.
JJJ. Ladies' Cloak and Retiring Rooms, &c.
K. Gentlemen's Cloak and Retiring Rooms.
LLLL. Lavatories and Water-closets to ditto.
MMM. Offices.
N. Staircases to Offices.
OO. Lavatories and Water-closets to Offices.
PP. Corridor.
QQ. Areas.

Ground-Plan.

A. Exchange.
B. Exchange Committee-room.
C. Chamber of Commerce.
D. Ante-room.
E. Entrance to Exchange.
F. Lavatories and Water-closets to Exchange.
G. Staircase to Assembly and Masonic Rooms.
H. Staircase to Dining-room, &c.
I. Kitchen Offices. Staircase.
J. Lift for Kitchen Offices.
KK. Staircases to Offices on Upper Floors.
LLL. Shops, with Stairs to Living-rooms, &c., in Basement.
M. Telegraph Office.
N. Entrance to Vaults, &c.
O. Passage.
PP. Areas.

EXCHANGE BUILDINGS, BIRMINGHAM: ABOUT TO BE ERECTED.——Mr. Edward Holmes, Architect.

NEWS FROM SCOTLAND.

Edinburgh.—The first stone of the new chapel to be erected by the Newington United Presbyterian congregation has been laid on the site at the corner of Grange-road and Causewayside. The chapel has been planned by Mr. R. Paterson, architect, and will be built under his superintendence. The plan consists of a south-east tower, vestibule, nave, minister's rooms, library, committee-room and lecture-hall on the ground-floor, and galleries above. The style is Early English. In the tower the corner buttresses are carried up to a height of 32 feet, between which is a large triplet window, traceried and subarcuated in the head. The fenestration of the nave and front galleries is composed of two tiers of couplet windows, painted and traceried. The back gallery will be lighted with a traceried rose window, 11 feet in diameter. The main roof is supported on iron columns, which are arched above the galleries, and form a continuous arcade the whole length of the interior. The ceiling, which will be panelled and enriched, is 42 feet from the floor of the nave. The dimensions of the building are:—Total length, 130 feet; total breadth, 70 feet; height of roof, 60 feet; height of tower, 100 feet. The cost will be 6,000*l.* The church will be seated for 900. The contractors are—for mason work, R. Hutchison; carpenter work, A. Forbes; plumber work, R. Hume & Co.; slater work, J. Low; plaster work, W. Baird.——The memorial sculpture of the fallen house in High-street, Edinburgh, has been placed. The sculptured head of the boy forms the keystone of the arch leading down to Paisley's Close, and the words, "Heave awa, chaps, I'm no deid yet," are carved on the two large stones placed above the keystone, enriched with foliage. The sculptor was Mr. Rhind, of Edinburgh.

Building Trade Decision in Edinburgh.—On 14th July, about forty mason's labourers, in the employment of Messrs. G. Paterson & Son, builders, made a demand on their employers for a rise of wages of 1s. per week; and this having been refused, they discontinued the work they had commenced in the morning, and deserted Messrs. Paterson & Son's service without any previous warning. Messrs. Paterson caused each of them to be summoned before the Sheriff Small Debt Court, for 7s. 6d. of loss and damage, occasioned by their desertion. Sheriff Hallard, having heard the case, gave his decision in favour of the employers, saying,—"As not unfrequently happens; in the defender and his fellow labourer's eagerness to prove their case, their contention has gone beyond it. Endeavouring to prove that they were entitled to go away when they did, they have contended that they were entitled to go away when they *liked*. The defender's view of the contract when analyzed really comes to this, that there was a contract without any period of subsistence in it—that is to say, no effectual contract at all. I cannot take this view of the matter. There is neither evidence, law, nor sense in it. It is the poor man's interest, much more than his employer's, that both parties should be bound by their contract, fixed by the rules of trade." Mr. Paterson then stated he had not brought the cases into court on account of the money, but to have it decided whether an employer was bound to submit to the loss and inconvenience of his labourers leaving his employment in the middle of a day; and he restricted the claim of damages to 2s. 6d. against each of the parties. Decree was pronounced for that sum, with 4s. 1d. of expenses against twenty-eight of the labourers.

Dumfries.—The plans and specifications for the New Court House and County Buildings for Dumfriesshire, which have been approved by the Local Commissioners of Supply, will be opened to public inspection. It is intended to erect the buildings on the vacant ground in Buccleuch-street, Dumfries. According to the local *Courier*, the elevation shows a pile in the Franco-Scottish style. The plan provides accommodation for the various county officials. The edifice will consist of a main building of three stories, and sunk flat. The principal entrance will be by an arched doorway in Buccleuch-street. Projecting from the wall, above the doorway, a turret rises to a height of 75 feet from Buccleuch-street. On each corner of the building there are smaller turrets; that on the corner nearest the bridge being connected by a battlement with the central tower. The court-hall, on the first floor, is 50 feet by 30 feet 6 inches, extending the breadth of the building. The court-hall has two windows on the east and one to the west: it is also lighted from the roof, and provision is made for ventilation. The second floor does not extend over the court-hall.

Renfrew.—The new parish church here has just been completed, and opened for worship. The new edifice, erected on the site of the old parish church, and of which the first stone was laid on May 24, 1861, is in the Early English style, and has a spire 180 feet in height. The church is seated for 1,000 persons.

Banff.—The works connected with the new cemetery at Banff are now finished, and the cemetery is ready for its intended use. The site is on the south side of Firwood Hill, and distant about three quarters of a mile from Banff. Its area within the walls by which it is inclosed measures 5 acres 30 poles 27 yards. Of this area, 1 acre, 3 roods 25 poles and 20 yards have been set apart for free burial; and 1 acre 3 roods 12 poles 18 yards for disposal to those who may incline purchasing ground in perpetuity. The free ground contains ample space for 2,928 graves, and that for select or purchase graves 1,733, besides two plots which have been set apart for vaults, and which contain space for 184 interments. The area inclosed has been laid out in accordance with the design furnished by Mr. Reburn, Edinburgh. The keeper's house contains a record chamber for the cemetery purposes; but there being no church service at funerals in Scotland, there are of course no mortuary chapels. The map and working plans were drawn by Mr. Bisset, of Banff, architect, and the mason-work was executed by Mr. Lawrence, also of Banff. Mr. John Grant executed the gardening works. The cost of the whole has been about 2,700*l.*

Crathie.—The foundation-stone of a new Free church has been laid at Crathie, Balmoral, by the Earl of Dalhousie, in presence of a large assemblage.

Aberlour.—The new church here has been opened. The *Elgin Courant*, in describing it, says:—The tower stands, as it escaped the fire, on the south end, as it did in the old church; and, in order to harmonize with its architecture, the new place of worship has been built in the Norman style. The building is 66 feet long by 47 feet broad,—7 feet shorter, but 14 feet wider, than the former church. As seen from the Square of Charlestown, the building wants the airiness of Gothic architecture. Both the side walls of the church are exactly the same. There are four breaks in each, and in every one of the breaks a window. In the prominent breaks, which project 6 inches, the windows are ornamented, having columns and zig-zag mouldings on the sides, and interlaced mouldings running round the arches from the capitals. The windows in the receding breaks are plain, having only some common mouldings. In the north end of the church there are three windows, two of which are of the same shape as the side windows, but smaller; the third being high up and circular. Here there are also two doors, not of large size, intended as a means of egress from the lower area, but not to be used for entering the church. The only entrance is through the tower on the south end, as in the former building. The lower part of tower has been undergoing repairs. The church is seated for 750. The walls are coloured dark brown in imitation ashlar. The windows are diamond-paned, of obscured glass, with margin of tinted glass, red and yellow, with blue panes in the corners. The tower was too heavy for the old church. It is, if anything, light for the new one; or, as the roof of the church goes up some 10 feet higher on the tower, the dials of the clock should be raised, in order to give the villagers the full advantage of seeing the time. The wall of the church on the north end has been built with a view to the erection of a vestry there.

CHURCH-BUILDING NEWS.

Aubourn (Lincolnshire).—On Thursday, the 17th of July, the new Church of St. Peter, Aubourn, was consecrated by the bishop of the diocese. The edifice was commenced by the late Mr. Henry Nevill, of Wellingore, owner of great part of Aubourn and Haddington; and was continued and completed by his widow, and presented to the parish. The character of the church is that of the Transition period. It consists of a nave, transept, chancel with apse, and a tower and spire on the south side of the chancel. The walls are built of the local stone, with Ancaster stone for all the wrought work, and for the inner surfaces of all the walls. The roofs are open timbered, with the exception of the apse, which has a semi-dome, of stone. The fittings are of oak, from the estate. The architect was Mr. J. H. Hakewill; and the builder, Mr. Huddleston, of Lincoln.

Lincoln.—Considerable alterations and improvements have been lately effected in the interior arrangements of the parish church of St. Mary Magdalene. The old reading-desk, clerk's desk, and one or two square pews, which obstructed the view of the altar, have been removed, and open benches and reading-desk of stained deal substituted. Several new sittings are obtained. The pulpit has been lowered some feet, and four carved oak panels inserted in the place of the former plain ones. The greater part of the cost of these improvements is provided for by the liberality of Mrs. Fowler. A font, designed in some measure by the Rev. G. T. Harvay, curate of the parish, and executed in Ancaster stone by Mr. W. Huddlestone, has been presented by Miss Hutton, East-gate. Mr. Martin, cabinet-maker, Bail-gate, has been employed to carry out these alterations.

Louth.—The chief stone of the new church for the district of St. Michael's, Louth, has been laid. The site is on the east side of Long-lane, and just opposite the new road leading out of Newmarket. The site has been purchased by the Rev. W. Wright, rector of Brattleby, who also contributes 1,000*l.* towards the fabric. The design has been supplied by Mr. James Fowler, of Louth. The dimensions are as follows, viz.: nave, 62 feet long by 19 feet wide; aisles, 63 feet long by 12 feet 6 inches broad; chancel, 30 feet long by 17 feet wide; vestry and organ-chamber, 20 feet by 12 feet wide. The height of the chancel will be 38 feet; of nave, 43 feet; and of bell-turret, 75 feet.

Weymouth (Dorset).—A vestry meeting, presided over by the Rev. H. C. Pigou, rector of Wyke, has been held here, to receive and consider the report of Mr. Wyatt, the architect for the diocese, on the condition of the piers and arches of Wyke Church. It is stated, according to the *Dorset Chronicle*, that little harm had, as yet, ensued from the cracks which had taken place in the pillars; but, that unless remedial measures were at once adopted, serious injury might be apprehended. The recent alterations in the church had also weakened the masonry. He advised that a block of concrete, 4 feet square and 3 feet deep, should be placed under each pillar, and on the concrete two large stones, each 3 feet thick. The chairman said that the cost of strengthening each pillar would be about 8*l.* or 10*l.*; and as there were eight pillars to be strengthened, the cost might be stated at 80*l.* Mr. Wyatt had also pointed out a settlement in the south-east part of the chancel. Some of the ratepayers present thought that the defective state of the church arose from imperfect drainage of the roof. A Weymouth committee was formed, to confer with the Wyke committee.

Stafford.—The new Roman Catholic Church of St. Augustine, at Stafford, has been opened. The building, which adjoins the old church, and is at the same time connected with the priests' house, is a brick erection in the Decorated style. The cost has been little more than 2,500*l.* The architect was Mr. W. E. Pugin. The interior of the structure consists of a nave and two aisles, the nave terminating in a semi-octagonal apse, and being separated from the aisles in the usual manner by arches and columns. The centre of the columns consists of a shaft of granite marble, supported on a base of white Sicilian marble, and this again on a support of Yorkshire stone. In the apse at the farther end of the nave there are three stained windows, by Hardman, of Birmingham, each containing three figures. In the centre is a representation of the Crucifixion, with the Virgin and St. John on either side; upon the right are the Saviour, St. Augustine, and St. Gregory, with three of the children known as "non Angli sed angeli;" while on the left are "the Good Shepherd," St. Peter and St. Paul; the figures being surmounted by the tiara. In the centre of the apse is of course the high altar, of Caen stone. The "gradus" on each side of the tabernacle is elevated above the "table of the altar," and the tabernacle itself also stands at a considerable height above the "gradus." It is surmounted, as usual, by a large crucifix. The aisles terminate in chapels, that on the left being dedicated to the Virgin Mary. Here is an altar covered with blue and white silk, and bearing at its front an oft-repeated inscription, "Sancta Maria, ora pro nobis." The images of the Virgin and Child stand on a pedestal upon the left, under a canopy of blue and gold; while in a corresponding position, on the opposite side of the church, is a figure of St. Augustine, bearing his crosier. At the western extremity of the church the organ is situate, in a small gallery fronting the high altar. The builders, Messrs. Hill & Son, of London, have constructed it for about 200*l.* In the west front of the church, and to some extent concealed from the congregation by the organ, is a large window of stained glass taken from the old building. In the

window itself, with its geometrical tracery, there are perhaps more distinctive marks of the Decorated style than in any other part of the bnilding; but the glass it contains exhibits a diversity of design. In a short time it is hoped that a sufficient sum will be raised to allow the completion of the architect's design by the erection of a spire. The builder is Mr. Jeffreys, of Stone.

Upton Bishop (*Herefordshire.*)—The church here has been reopened. Mr. Scott was the architect employed in the restoration, and Mr. Chick, of Hereford, the builder. The restoration has been mostly in the interior; the only exterior work worthy of notice here being the underpinning of the foundations, and the making of the drainage good around the walls. To make the floor high and dry, formerly the flags were more than once taken up, and some hundreds of loads (perhaps) of rubbish carted there to raise the level. All that was thus done to keep the floor of the church up with the continually increasing level of the churchyard has been undone, and the stuff wheeled away. By removing the superfluous soil the bases of the pillars, which are of early date, have been exposed, and the floor has been laid throughout with concrete. In the chancel two lancet lights have been reopened, and the original central light has been filled with stained glass by Messrs. Hardman, of Birmingham. A small window in the north side of the chancel has also been filled with stained glass. The gallery in the south aisle has been removed, and the aisle otherwise restored. A window in the south side of the church has been filled with geometric tracery; and another small window, discovered beside the pulpit in the north aisle, has been filled with stained glass. Various other improvements and restorations have been effected, and the church reseated with open sittings of white pine, and floored throughout with encaustic tiles by Mr. Godwin, of Lugwardine. About 1,200*l.* have been expended.

Birkenhead.—Mr. Jackson, M.P., and Mr. Thomas Brassey, have announced their intention to build a church at Claughton, Birkenhead, where it is said to be much required. Mr. Jackson, in addition, gives the site.

Bromborough.—The foundation-stone of a new parish church for Bromborough has been laid, according to the *Liverpool Albion*. The new building will, when completed, accommodate 600. It is to be in the Gothic style of architecture, with a spire, and will be built of red sandstone from one of Mr. Mainwaring's quarries in the neighbourhood. It will cost between 5,000*l.* and 6,000*l.*; towards which the late Mr. Charles Mainwaring gave the sum of 2,000*l.* Mr. Scott is the architect, and Messrs. Holme & Nicol are the builders.

Crosby (*Liverpool*).—Mr. Schofield having offered to erect a Wesleyan chapel at his own cost, and also to build some cottages and devote the rents towards the endowment, the offer (says the local *Courier*) was gratefully accepted; and plans have been drawn by Mr. C. O. Ellison, of Liverpool, architect, for a building in the Norman style of architecture; which, when completed, will be capable of accommodating a congregation of 300 persons; school and vestry accommodation being provided underneath. The cost of the land was 700*l.*; and the contract for the building has been taken by Messrs. W. & F. Witter, of Liverpool, for 2,400*l.* The cottages will cost 1,200*l.* or 1,400*l.*; and as Mr. Schofield intends to provide an organ and furnish the chapel completely in every respect, he will incur an expenditure of about 5,000*l.* The foundation-stone of the chapel was recently laid by Mr. Schofield.

Warrington.—The first stone of a new Congregational chapel has been laid at Lymm. The site selected is within five minutes' walk of the railway station. The building will be in the Gothic style, built entirely of Lymm stone. One of the chief features outside will be a bell-turret. There will be accommodation within for about 400 people. There is to be a gallery at one end. The roof will be open, and the pews also on the same principle. It is to cost 3,000*l.* Mr. Walters, of Manchester, is the architect; and Mr. S. Bramhall, of Hulme, the builder.

Saddleworth.—The Bishop of Manchester has laid the foundation-stone of a new church to be erected at Denshaw, in Friar Mere, Saddleworth, at the sole expense of Mr. and Mrs. Henry Gartside, of Ashton-under-Lyne. The church will accommodate 400 persons. It will be of stone; the roofs open-timbered. Dimensions—extreme length, 88 feet; width, 46 feet 8 inches; height, from floor to ridge, 40 feet; tower, nave, and chancel of equal width outside, viz., 23 feet 8 inches. The clerestory will be lighted by quatrefoil windows. The entrance is through a porch near the west end of the south aisle, and the aisles extend halfway along the sides of the tower and chancel, forming transeptal chapels on each side of the latter. The north transept wil be prepared for the organ, and the south transept fitted up as a private chapel. There will be a five-light traceried window in the east end of the chancel filled with stained glass. Mr. J. Eaton, of Ashton-under-Lyne, is the builder. It is estimated that the erection and endowment will cost 10,000*l.*

Hunslet.—The foundation-stone has been laid for the rebuilding of the parish church. The estimated cost of the erection is 5,000*l.*; and the contractors for the various departments of the work are—For the masonry, Mr. J. Hardwick; joinering and carpentering, Mr. W. Britton; plastering, Mr. P. Mountain; plumbing, Mr. T. Bedford; slating, Mr. J. Lawson; and painting, Mr. W. Nelson. The architects are Messrs. Perkin & Backhouse, from whose design a stone church is to be built capable of containing seats for eight hundred and fifty persons; upwards of three hundred seats being free. The style of architecture will be the Early English; and the edifice will consist of a nave, two side aisles, two transepts, organ chapel, and vestry, but no galleries.

Leek.—The foundation-stone of a new Independent church has been laid here, on a central site in Derby-street. The style of the new church will be Gothic, of the fourteenth century. The site is of insufficient width to admit of such a disposition of plan as the architect would otherwise have adopted. The Derby-street elevation, according to the plan, comprises a porch on one side, and a tower and spire on the other. At the base of the spire is an octagonal lantern, with buttresses at the angles, terminated with carved and crocketed pinnacles, with perforated tracery in the side openings, and with panelled and cusped parapet. The spire is finished with an ornamental iron terminal, at a height of 110 feet from the street level. A principal feature in this elevation will be a large five-light window with tracery, and hood moulding with carved bosses; and round the hood moulding a radiating arch, alternating in courses slightly varied in colour. The side is divided by buttresses into six bays, with a two-light lancet-head coupled and traceried window in each, with hood mouldings and alternating arches. Under these are three-light windows, with traceried heads, lighting a boys' Sunday school beneath the church. The floor of the church is raised 4½ feet above the street level; and this, with the declivity of Russell-street, has enabled the architect to obtain the room referred to beneath the church, which will accommodate 500 to 600 persons for lectures or public meetings. Between the entrances is a corridor separated from the church by a glazed screen, excluding cold draughts, and affording the attendants command over the entrances without disturbing the congregation. The entire length of the church within the walls will be 72 feet, and width 34 feet. Including the orchestra, the interior length will be 85 feet. The hammer-beam roof of the church has carved ribs, springing from moulded and carved corbels. The principal timbers will be exposed, the spandrels filled with perforated tracery, and the constructive ironwork of the roof will be painted in colours. The horizontal portion of the ceiling, slightly curvilinear in form, will be stopped at some distance below the apex of the roof, and formed into panels by moulded ribs. The seats will be open. There will be a gallery at one end of the church, only approached by a staircase in the tower. At the rear of and attached to the church will be the girls' school building, comprising; on the ground-floor, corridor, class-rooms, infant school, &c.; and over the whole the girls' Sunday school. The turret stairs, between the schools and the church, are surmounted by a spire 66 feet in height, with ornamented iron terminal, and covered with slate in coloured bands. The whole of the interior woodwork will be stained and varnished. The church will be lighted by star or sun light suspended from the roof, and the whole of the building ventilated, the spires being made available as outlets for vitiated air. The works have been designed by Mr. Sugden, of Leek, architect, and will be carried out under his superintendence by the following contractors, namely:—Mr. J. Naden, the stonemason and bricklayer's works; Messrs. W. & J. Nixon, the carpenter, joiner, slater, and plasterer's works; Messrs. J. & J. Hudson, the carpenter and joiner's works of the school building; and Mr. J. J. Howard, the plumber, glazier, and painter's works—all of Leek; and the warming by Messrs. Haden & Son, of Trowbridge. The total outlay, including land purchased, lighting, heating, new organ, and other incidentals, will be close upon 4,000*l.*

Shirley.—The unsightly roof and parapet walls of St. James's Church, Shirley, are now about to be removed, and a new open roof substituted. The church is deficient both in light and ventilation, having a flat, low ceiling under the tie-beams: this is to be removed, and a tier of dormer lights, five on either side, introduced in the new roof, additional light being thereby obtained. The rafters and principals will be exposed, wrought, stained, and varnished, and boarded on upper side with diagonal boarding, which will also be stained. The walls and pews are also to be coloured and painted. Plans have been made upon a more extensive scale for the enlargement of the building, but the funds of the committee will not for the present permit them to carry out more than the new roof. A new organ is also to be provided by Mr. Halmshaw, which will be ready for the reopening of the church about the middle of August next. The work is being carried out from designs of Mr. Edward Holmes, by Mr. Hardwick, of Birmingham.

Cheshire.—The reopening of Middlewich Church took place on the 4th July, after a present outlay of nearly 3,000*l.*, towards which the lord of the manor contributed more than 1,000*l.*, and the rest has been collected through the exertions of a very indefatigable churchwarden, affording a strong contrast to the way in which churchwardens used to restore their churches. This church has been undergoing a gradual course of restoration for many years, from the plans and under the superintendence of Mr. Joseph Clarke, F.S.A., architect. The former works included the entire reseating and restoration of the interior, with the Lady and Kinderton Chapels. The works now comprise a very elaborate oak roof on the nave; the entire rebuilding of the modern clerestory, with a restoration and completion of the external masonry (excepting the tower), and other works, which have been carried out by Mr. Jones, of Liverpool, builder. A considerable amount of decoration is contemplated; besides which, several painted windows have been added, including one entire side of the clerestory. The main works now remaining, and for which the plans have been prepared, are new roofs to the aisles, and these will probably be commenced before long.

STAINED GLASS.

Boxgrove Church.—A painted window, by Messrs. O'Connor & Son, of London, has just been put up in Boxgrove Church, near Chichester, in memory of the late Duke of Richmond. It consists of three lights. The centre compartment contains the Nativity, Crucifixion, and Ascension of our Lord; and the side lights are also filled with scriptural subjects. The window was purchased by subscription among the tenants on the Goodwood estate.

Mount Carmel Church (*Redditch*).—The east window of stained glass has been removed, and a memorial window of like material, from Mr. Hardman's, of Birmingham, substituted, containing full-length figures of St. Gregory the Great and St. Augustine; the centre piece being the Virgin and Child. The window was inaugurated by Mozart's Grand Mass, No. 12.

PROVINCIAL NEWS.

Bury St. Edmund's.—The Bury new Corn Exchange has been opened. The design, by Messrs. Ellis & Woodard, of London, was selected out of thirty-five; and the contract having been obtained by Mr. Lot Jackaman, of this town, the first stone was laid on the 18th of June, 1861. The building covers an area of nearly 10,000 feet. The portico, and some of the internal decorations, yet remain to be finished. The new exchange is a parallelogram, measuring 119 feet from south to north, and 82 feet from east to west; the south front abutting on Abbeygate-street; the north facing the old exchange; the west side nearly ranging with that building and the town-hall; and the east side so placed that when (in 1867) the leases of the old houses fall in, there will be sufficient space to be cleared for a roadway in place of the present "Traverse," with some offices or other accommodation attached to that side of the exchange. The walls are of Woolpit brick, with stone portico and columns, pilasters, balustrades, and dressings. There are two entrances in the south front, and one on each side. The angles of the building are surmounted by stone balustrades, having three urns of Ransome's silicious stone on each. The west front has six round-headed windows; those at the extremities being of

smaller size than the other four, in consequence of their occupying the intended places of the door and the corresponding arch of the design. The east side has only one "side-light," at the southern end, to correspond with the door, the interval being blocked by the old houses. The east aisle is lighted from the roof by three lanterns, extending over the whole of it; whilst the west aisle is covered with tile creasing. The nave or middle roof is supported by seven arches on each side, of Ancaster and Hollington stone, laid alternately to relieve the colour; these being carried by six iron columns. The roof itself is elliptical, formed by cast-iron ribs, each of which weighs about five tons; the centre of the arch, for about one fourth of its width, being ceiled with three panels between each pair of ribs, having a *papier mâché* ventilating rosette in the centre one; the remainder of the arch, about 20 feet on each side, being covered with Hartley's patent ribbed glass, in panes of 5 feet length, two of which are straight and two bent. The ribs of the roof are supported by stone trusses carved with foliage and shell ornaments, and the keystones are also carved. The carving throughout the building has been executed by Mr. Barnett, of Norwich; Mr. Wiggett, of Bury; and Mr. Tolmie, of London. The floor was laid with asphalte by Messrs. Armani & Co., of London. Messrs. Ransomes & Sims supplied the iron-work. Mr. Darkin superintended the works.

Horbury.—The foundation stone of the House of Mercy has been laid, and the new burial-ground consecrated, by the Bishop of Ripon, at Horbury. The House of Mercy was established about three years ago, for the purpose of reclaiming fallen women, and training them in the pursuit and practice of industry, virtue, and Christian principles. The plans for the building have been prepared by Mr. Woodyer, the architect of the Houses of Mercy at Clewer and Ditchingham. It is proposed to accommodate about forty or fifty inmates.

ALBERT MEMORIALS.

City of London Memorial.—We are glad to hear that the corporation of London have commissioned Mr. Joseph Durham to execute in marble his fine bust of the Prince Consort, to stand with his bust of the Queen, which was presented to the City some years ago by Sir Francis Graham Moon.

Bridgwater.—A townhall is to be erected at Bridgwater, as a memorial of the Prince Consort. The cost will be about 1,500*l.* Plans have been submitted to the council by their surveyor.

Kirkwall (*Orkney*).—At a public meeting of the inhabitants of Kirkwall, a large and influential committee has been appointed, to consider the best form of carrying out the object of a general subscription in this town and parish for a national memorial in honour of the late Prince.

Coburg.—A number of the most influential inhabitants of Coburg have held a meeting in order to concert measures for the raising of a monument to the late Prince Albert in his native town. The meeting resolved to request the magistrates of Coburg to undertake the conduct of the matter.

COMPETITIONS.

The Oxford Workhouse.—The Local Board of Guardians,—as one of their number, Alderman Grubb, expresses it,—are "in a muddle" on the subject of their workhouse plans. A special meeting of the Board was held last week, to receive the report of the building committee on letters of complaint from various architects in reference to the recent competition and its re-opening on the 19th of August, as per new advertisement. One of these letters was from Mr. S. L. Seckham; stating that, as one of the competitors, he considered it unfair and unjust to ask further labour to be expended, until an adjudication shall have been made on the plans already procured. In reply, the Board allege misapprehnsion on the part of Mr. Seckham; and say that his first plan was revised and corrected by him, and submitted anew in competition with Mr. Fisher's, when the latter was selected. Mr. Bruton protested against the mismanagem nt of the late competition, and reviewed the proceedings. In reply, the Board inform him that his plan was rejected from its estimated cost exceeding the maximum stated. A joint letter was sent to the Board by Messrs. Bramwell, Bruton, Buckeridge, Castle, Seckham, and Shirley, all Oxford architects, also protesting against the conduct of the Board, and stating certain conditions which ought to be observed. To this the Board replied that they could not adopt the suggestions of their correspondents, but must adhere to the conditions already announced for the fresh competition, and could not exclude any plan complying with those conditions; but they add, it will be evident that none of the plans previously sent in would compete without large alterations, owing to the increased requirements under the new instructions, in which the suggestions of the Poor-law Board have been embodied.

ARCHITECTURAL ASSOCIATION.

A SPECIAL meeting was held on Friday, the 25th ult., the President, Mr. Blashill, in the chair. The report from the delegates appointed to attend the meeting of the proposed Architectural Alliance was read, and after some discussion it was resolved, on the motion of Mr. Paraire, seconded by Mr. Reeves, to defer the consideration of the question to the next session.

Professor Kerr attended by request and gave explanations upon various points in the programme of the Royal Institute of British Architects for an Architectural Examination; and a resolution, thanking the Institute for its action in the matter, and strongly recommending the subject to the attention of the younger members of the profession, was carried unanimously.

BUILDERS' BENEVOLENT INSTITUTION.

THE Fifteenth Annual Meeting of the subscribers and friends of the above charity was held on Thursday last, at the London Tavern, for the purpose of receiving the report for the past year; to elect the president, auditors, treasurer, and directors for the year ensuing; and other matters connected with the welfare of the Institution. Mr. George Plucknett, treasurer, occupied the chair.

Mr. A. G. Harris, the secretary, read the report, which stated that the events of the past twelve months, having reference to the financial interests of the Institution, presented so few features differing from those of the preceding year, that the directors, in issuing their new list of subscribers, contented themselves with thanking their kind friends and supporters, and briefly stating that the position of the charity was still satisfactory, although they could have wished, and expected to have seen it better, so that a larger number of the applicants might have been placed upon the funds of the Institution at the elections which were held in November, 1861, and May, 1862.

The sum of 506*l.* 11s. 11d. had been invested in the Three per Cent. Consols, being 440*l.* 13s. 8d. stock purchased for the Relief Fund, and 100*l.* 6s. 2d. for the Building Fund; making a total of 8,353*l.* 11s. 2d. stock belonging to the Institution, divided as follows:—6,006*l.* 0s. 5d. Relief Fund, and 2,347*l.* 10s. 9d. Building Fund.

The annual ball, under the able superintendence of the Hon. Secretary, Mr. Joseph Bird, had realized to the institution a profit of 103*l.* 15s.

The financial statement showed that the total receipts of the past year, including interest, amounted to 2,304*l.* 12s. 4d.; and after all expenses were defrayed, a balance was left in hand of 490*l.* 13s. 9d.

Various resolutions, thanking the officers for their performance of the particular duties, including one to the Lord Mayor, the president for the past year, for his assistance in their work of charity, having been put and carried, the election and re-election of the necessary officials were duly completed.

The Chairman then said that he begged to inform the meeting that Mr. Henry Lee, of Crown Wharf, Nine Elms, had consented to become their president for the ensuing year. He concluded by proposing Mr. Lee as their president for the ensuing year.

Mr. J. Bird seconded the proposition, which was unanimously carried. A vote of thanks to the chairman concluded the proceedings.

FIRE-SHIPS IN THE LONDON DOCKS.

CONSIDERING all the warnings we have had, and all the mischief which has been done, it seems extraordinary that so much carelessness is still shown in the stowage of inflammable materials, not only in the docks, but also on ship-board. As an instance,—the other day a fire broke out in a fine vessel of upwards of 600 tons burden. The vessel was a general trader, and was loaded with miscellaneous stores. The accident occurred from the explosion of a bottle of ether: becoming ignited, the flame rushed to twelve cases of *lucifer matches;* setting them also on fire, the sulphureous fumes and smoke created so much alarm, that it was thought that the ship would have been entirely destroyed; but, owing to the exertions of the men connected with the fire-engines, the damage was stopped before it spread to any great extent.

We do not know how many other equally dangerous matters there were in the hold of this ship; but those articles alone, particularly when crossing the tropical seas, would be likely to risk the lives of all on board more than the storm of waters. The stowage of such commodities requires more care than gunpowder; and measures should be taken in ships for the provision of fire-proof space, in which they could be kept separate from other parts of the cargo, and to which access could be readily had for the purpose of extinguishing any fire which might break out. Vessels loaded in the same way as that to which we have referred are unpleasant neighbours, and not much less dangerous than the fire-ships which formerly were used in naval warfare.

STREET ARCHITECTURE.

OUR Parisian neighbours exclaim, "London is indeed an ugly city." With the finest situation in the world, why do we allow our buildings to be deficient in style and taste, especially the shops in the principal thoroughfares? I was glad to see, on my way to the Exhibition the other day, passing along Oxford-street, a handsome structure lately erected by Messrs. Laurie & Marner, the well-known coach-builders, who availed themselves of the services of Mr. O. Parnell, as architect, and Myers & Son, as contractors, who, in the short space of six weeks, completed the work. The front consists of a lofty Corinthian colonnade, the columns resting on massive rusticated piers, and supporting a bold entablature; the example for the order being taken from the Temple of Jupiter Stator at Rome. The intercolumniations present a series of flat arcades, divided by pilasters; the intermediate floor-spaces being filled in with relieved panels and other embellishments. It has altogether a good effect. M. P.

WORKMEN AND CHURCHES.

SIR,—I think that, so far, all your correspondents on this subject have missed the true source of the evil. Of course it is pretty plain that, if every one went to church, as they ought, there would not be room enough; but it seems to me that the true source of the evil is in the pew-rents: a workman cannot afford to pay them, and does not like to be put into a seat labelled "Free." There are now plenty of churches in which all or most of the seats are free, and where an offertory is collected; so that a man may contribute according to his means or inclination to the support of the services. As regards services in workshops, I should think there were few churches at which, upon application, a clergyman could not be found to conduct them; or, still better, to open the church at a stated time for them. E. D.

ON THE SPIRIT OF MODERN WORK.

ALL good work in the present day must be a protest against the triviality, money-worship, and machine regularity of our time. It does not follow that such should be the spirit of work in another age; but in ours it is plain that art must fight the ease, elegance, and sensuality of modern society, because in themselves they are detestable traits of character. Designers are now chiefly occupied in drawing patterns for articles to be made by machinery—not a very noble occupation for human minds; and their designs never can be anything but geometrical patterns or symmetrical foliage,—also not a lively prospect. Now, surely, a wall with a flight of birds painted on it, and half a dozen of them having a good fight in the Japanese manner, is more interesting and contains more life than a million diapers. But this work cannot be done by machinery: you cannot throw life into anything made by machinery: a hanging or carpet, with some violent grotesque dragons, animals, fish, doing something, not in a state of modern lethargy, is more amusing than the incipient, chilling, flat patterns one is treated to now. The spirit of Japanese work is right—full of life, vigorous, and severe. I cannot see anything approaching this in modern English machine patterns: we must either put up with cold mediocrity of design, or else restore hand-work. Modern furniture is full of every type of sensuality: there is no severity about it: the woodwork, without any reference to construction,

is twisted into shapes for sensual posture: to avoid this, woodwork ought to be rigidly straight, and the cushions cut and made into the shapes you require for ease, but not the framework. However, no material shows the effect of modern old-maidish trimness, or of measured exactness, like our painted glass windows: here the surface is covered in now with French conventional foliage, as stiff and as unmeaning as possible. What do you want in a glass window? An intelligible picture, of brilliant gemlike colours, with the background filled in with any quantity of bits of glass to make up a noble mass of colour. Now, I ask, what can be the use of filling in such spaces with black lines representing foliage? You do not want black lines: you want colour. What can be the use of drawing a stiff border? Surely a lot of bits of glass, put in indiscriminately, will insure more effect; and the glass must not be too even in colour: it is the unevenness of tone of old glass, and of oriental textile fabrics, that gives them such lifelike effect. If at the Exhibition, I would call on your readers to notice the difference between the glass of good and bad design. The latter is mathematically cold and accurate; all over foliage drawn in black lines and finicky borders: the former has a noble pictorial mosaic design; which, were the glass better, would be of splendid colour; but this is no fault of the designer: the back is filled in with rough irregular glass, bits of diapers—anything, in fact, to get the desired effect of breadth of rich colour; but throughout the whole there is an absence of useless labour and finicky patterns, and no sign of that disgusting geometrical regularity in arrangement of pattern, of lead lines, common in the backgrounds of most windows. Another point, and I have done. Painters that do nothing but run after pretty faces to paint, are not artists. If there is a fault even in early Italian art, it is its slight hankering after the ideal. Now, early Flemish is far nobler. Matsys, Memling, Joseph of Ghent, &c., had no ideas of classical straight noses, or of freezing machines generally: they painted the people they saw: they painted the colours they saw. What noble, manly, characteristic work it is! and what a noble painter the same feeling and country have produced now,—Leys, one of the very few men who paint wholly right in this vulgar, pot-house age—age of iron railings; age that hates hedges; age that loves the cold formality of Greek form in preference to the honest, manly, rough, old Flemish! A great test of the excellence of Flemish mind and painting is the fact that it withstood the influence of the *renaissance* of Classical art longer by two hundred years than Italy. About late Belgian work there is a quaintness of great manliness; and that quaintness of character in a great degree exists to this day: it has produced Leys; just as, in England, Queen Anne's time saw some excellent quaint architecture, pottery, and furniture; particularly in country towns beyond the reach of the civilizing element.

There is a beauty in Flemish art which is not noticed by our "classics;" and it is a beauty which gives intense natural life to work: I mean the crowds of figures: how they are all huddled together, the numbers coming up from the back to the front: this foreshortening has a wonderful natural effect. I do not think too many figures can be crowded into a painting: the more the merrier, is thoroughly true when said of Flemish art. In Limoges work it is to be found too: it is so jolly and unacademic. Again I ask for crowds of figures huddled together, and plenty of them coming up from the back to the front. There is a glass window in the Exhibition full of this. A. W.

INTERNAL ARRANGEMENTS OF THEATRES.

Some months ago I drew your attention to Tietz's Berlin Victoria Theatre as a building of rather novel construction. I now give, in form of a list, certain especial points that should be taken into consideration by architects. They are not all that is necessary; but they are points not generally understood except by those who have seen the working of theatres in various countries.

Front of the House.

1. Each tier should have a separate staircase, to facilitate the exit. The principle of drawing people on to one staircase is fallacious, as also that of crush-rooms.

2. The external form of house should be the same as the internal, as at Dresden, or Coliseum at Rome.

3. The lighting should be effected without chandeliers or stars, or anything to impede the view of the spectators in the gallery.

Stage.

1. At the side of the wings there should be a wide, clear passage; then, beyond this, docks for temporary placing of wings; and in these docks lifts to take carpenters from the very bottom cellar to roof of house, and grooves in the walls for counter-weights.

2. Beyond these docks, on each side of house, must be passages the whole length, and parallel with the stage from front to back; and out of these passages, dressing-rooms for principal artists, and waiting-room for chorus—ladies one side of house, gentlemen the other. Immediately on the tier above or below are to be dressing-rooms for artists, chorus, ballet, supernumeraries, children, and military band; men and women on different sides of the house. At each end of passage, staircase leading to floor above. Munich is a good theatre to study for this arrangement.

3. The mezzonine floor must be high. It is the custom abroad to have the wings on ladders, which come through and run on wheels on the mezzonine floor: this is a good arrangement for opera; but for pieces where there are constant changes of scenery, they do not work fast enough for England, as in this country it is not customary to drop the curtain; and wings at the best are but barbarous make-shifts for set scenes, which cannot always be used. As to general working, hydraulic pressure ought to be introduced if possible.

3. The house should be high enough to allow the scene cloths to go right up without doubling.

4. The wardrobes, and tailors or dress-makers' shops, on floor above dressing-rooms, with lifts to let up and down the costumes.

5. The magazine for properties must be close to the stage, at the back, leading immediately on to it, in order that the properties may not be brought on the stage before wanted. Above this, or near it, the carpenters' shop, with staircase leading to painters' room, which should be at back of stage, so that the painters may paint upright against back wall of stage, and the cloths let down on to stage when finished, as at Covent Garden.

6. The solo, chorus, and ballet rehearsal rooms should be situate somewhere not too distant from the stage.

7. The music, library, copying-room, and orchestra waiting-room, near the orchestra.

8. The manager's apartments near the stage, with connecting doors to front of house and stage; separate staircase to outside; and waiting-room; the whole as inaccessible as possible, and mysterious; as no one is ever so troubled with importunate and useless talkers and acquaintances as a manager; his great difficulty being to get peace and quiet.

9. Secretary's and treasurer's rooms, near manager's.

10. Porters' apartments, with good kitchen for house-dinner.

At both sides of the house, with straight passage leading horizontally from back of stage, should be magazines for wings and scene cloths; the great object being to get these away without going round corners, or in any manner bending the cloths. Magazines should be fitted with racks to place cloths on, and wings with grooves to slide into easily, to be got out at any moment.

Questions for the machinist are—to consider the point of flat or inclined stage, and the possibility of working the drops from the stage in the docks, instead of up in the flies. A. W.

THE POSSIBILITY OF A NEW STYLE.

It is of importance, in considering the subject of the possibility of creating a new architectural style, that its avenues and immediate precincts be kept clear of whatever would tend to mislead or confuse, in order that, its principles being distinctly recognized, and our duty in relation to it clearly apprehended, we may entertain the one and act out the other.

This remark suggests itself on perusal of your correspondent "S. G. C.'s" letter in the *Builder* of Saturday's issue.

Agreeing with that writer in spirit, but differing on the issue sought to be established, I shall, with your permission, make a remark or two thereupon.

The general tenor of the letter is, I apprehend, that of a disposition of reverence for the architectural achievements of the past, assigning them a place from which it is neither desirable nor possible to remove them.

This reverence for the past and its works is natural and essential to the well-being of art, as furnishing incentives for us to go and do likewise. It is furthermore dutiful, and bespeaks by analogy a certainty of reverent and careful working in those who entertain it. And again, since the spirit which animated the works that prompt such reverence can by this means alone be imbibed and wrought out,—a spirit common to all times, and without which art cannot flourish,—most heartily do I indorse the sentiments of the writer in the tribute of respect accorded to eminent modern practitioners, the faithful and successful workers in past styles.

The purpose they fulfil is high and requisite; for how more certainly revive and perpetuate a lost or almost extinct taste than by the study and reproduction of past works of beauty, which, in the process of resuscitation, shall disclose the secret of their life and power.

Thus far, in harmony with the writer, I maintain the integrity of past works, and justify their careful study and reproduction in the infancy of a reviving art; but here we begin to pursue divergent routes.

That the future of architecture shall be as the present, with no material change in its phases—nothing but ebb and flow between the two great present existing styles—is an idea I cannot for a moment entertain: the law of progress is supreme as heretofore, still working its work, baffled now and again, yet always advancing its conquests and leaving us without the least vestige of guarantee that present art shall stagnate.

Our art-wealth may be sufficient, but the human soul is ambitious, and will not be content, fetter it as we may.

But, assuming that contentment is the characteristic sentiment with which our present architectural practice is regarded, does that argue the necessity of a standstill?—does it justify us in violating, if we could, the natural law of progress by arresting the powers of art-conception and execution, saying to them, thus far may ye come, and no further? It were an indignity even to the most inferior commercial pursuit to demand from it a contentment which, if accorded, would, in its legitimate application to the highest commercial transactions, stultify commerce and weaken its power—much more so to exact this from art.

Two styles of exquisite beauty we unquestionably have and these with depths yet unfathomed, but wherein from this the inference that they so compass sea and land of the world of art, that a third shall find no resting-place? These, however, "representative of the feelings and requirements of the 19th century," I cannot with propriety presume as so all-sufficient and prevailing as to afford no place for a future representative style—nay, from the very fact that two styles so antipodal to each other are equally appreciated and sympathized with, we cannot but admit the *possibility* of another arising and recommending itself on the strength of credentials as valid and worthy. And should such a style arise, I believe that admiration for the old will not disdain to associate with respect for the new, both having their common origin in the beautiful and the good.

While at this stage, I may be allowed to correct a fallacy of argument in the closing remarks under the first of the two heads the writer professes to prove — this correction the more necessary, inasmuch as our statements will be thereby strengthened.

While quite right as to the absurdity of the man refusing to avail himself of an advantage on the scruple of the merit of its origin resting with another, a vital defect in the enforcement of the subsequent illustration suicidally invalidates the argument, for the material on which the worker in metal employs his skill, and the words as media for the expression of an author's ideas, have their counterpart not in the styles in which the architect embodies his conception, but in the forms on which these styles are based, and of which they are the characteristic expressions.

Style may be defined as a characteristic combination of forms in harmonious relation to each other; forms being the base, and therefore of greater importance than the superstructure, are what we have primarily to deal with; and as they are the special property of no style in particular, except by virtue of their harmony with the principles upon which that style is based, the limit to their use it is absolutely impossible to determine: where then is the argument against new harmonious combinations which shall have as their issue the formation of a "new style?"

The last question of your correspondent, namely, "Whether a new style could be founded or not if one was required?" is met with a dogmatic ne-

gative which I think is associated with reasons as questionable as the proposition they are intended to support.

That we have had no experience of a thing does not argue the impossibility of its occurrence; hence the fallacy of the dogma that "centuries of thought and labour have taught us that but two styles suit us—Classic and Gothic—"an assertion wrong in its anticipating the future, and pronouncing a deliverance upon what does and what does not exist. It is true that classic and gothic are the styles in which we are most pleased to practise, as of all others best suited to our sentiments and wants; at the same time a corresponding argument was as applicable, and possibly had its reasoners in the period when gothic was as yet undreamt of: the new style nevertheless arose, waxed and waned: how then can we pronounce with authority upon the unfoldings in the future of architecture?

The great change of style may come by a slow or by a sudden process: hard thinkers, profiting by the earnest labours of the venerated revivers of antique forms, may urge it into vitality ere long; or it may, on the other hand, be as hitherto in the laws of progress, that its birth shall be heralded in by the culmination and gradual decay of the great styles of old. G. S. A.

AWARDS AT THE INTERNATIONAL EXHIBITION.

We are asked to insert the following letter, which has been addressed to Sir John Rennie, as President of Section A, Class 10; and to which no reply has been received:—

"July 23.

"Sir: There is a very uncomfortable feeling, as well among the exhibitors in Class 10, as in the trade, about the awards of medals to Messrs. White, Brothers, for Portland Cement, and to the Siliieous Stone Company for stone, neither of which firms are exhibitors, or have occupied space. It is felt that some explanation is due where the contributions of these firms may be seen.

Begging respectfully your immediate information on this subject,

We remain, &c.,

Knight, Bevan, & Sturge,
Lee, Son, & Smith,
John & Wm. Eastwood,
J. Cumberland Part,
F. & G. Rosher,
Freen & Co."

Terra Cotta.—Sir,—I beg leave to say you have inadvertently done me a wrong in giving a list of awards in Class 10, in which I have the flattering unction of Hon. Mention only; whereas I am awarded a prize medal; but in consequence of my principal object being omitted by the jury of 10, and this being discovered on the 1st of July, when too late, my works were then examined for Class 35, and the medal awarded acccordingly. I recollect the Editor of the *Builder* was one of the jury who conferred full honours on me at the 1851 Exhibition, when my works were far inferior to those I now exhibit.

Jas. Pulham.

TREES IN OUR STREETS.

Your remarks on trees, in the last number of the *Builder*, induce me to hand you a few observations on town plantations.

It would be hard to find, even in Asiatic Turkey or Persia—where the Oriental plane is indigenous—finer specimens, for their age, of this tree than those growing in some of the West-end squares of London. Considering the enormous size to which the plane, in ordinary circumstances, is capable of attaining; and the vigorous way in which it grows in this country; it is evident that the day will come when the plane-trees of our metropolis will constitute one of its most remarkable features; for there is nothing whatever to hinder them acquiring the dimensions of some of the famous Eastern *chunars*. What a magnificent grove, for instance, may not the planes of Berkeley-square at some future day present! With fair play, they will yet rival in stature such trees as the celebrated plane near the ancient Nicæa, which I found by measurement to be 36 feet in circumference at a yard above the ground, without a single spot of decay in trunk or branch. This peculiar suitableness of the Oriental plane to the climate of London must render it always the principal stock for metropolitan plantations; with which, however, other species should be intermixed for the sake of variety. It is a great misfortune that a prejudice has arisen in this country against the planting of trees even in wide streets and town roads. The general want of elevation and mean character of the houses in many of the main lines of traffic, in and about London, would be at once counteracted and concealed by rows of trees along the curb-stones. There are not a few lines (Mile-end-road, for instance) which might be supposed to have been planned for the reception of trees, and which would entirely lose their vulgar and hideous aspect by well-regulated planting. Let the imagination represent this or any of the other wide avenues of London, now so uninteresting and dreary, lined with rows of such trees as are to be found in some of the West-end squares, and what a change of scene is at once conjured up!

The chief cause of the prejudice against curb-stone trees is that they cause damp. A little reflection will, however, show that there is no foundation in fact for this idea. Trees, as a general rule, absorb more moisture than they give out. The period of the year when alone they can intercept the sun's rays and create shade (namely, that during which they are in leaf) is precisely the one in which water is constantly and largely used for allaying the dust, and, of course, to some extent, producing damp. In winter, when shade might be a disadvantage, deciduous trees have no leaves, and consequently can throw no shade on the ground. But there are in London just sufficient street trees practically to prove how groundless is the prejudice entertained by the authorities against kerb-stone trees. Who suffers in Piccadilly, Cheyne-walk Chelsea, or those detached parts of Highgate, Hampstead, Hackney, &c., in which the ignorant vandalism of modern London builders has spared the superior arrangements of older times? Does not every one feel that those spots where the curb-stone trees remain are pleasant oases in a wilderness of slovenly abominations in brick and cement? Were it impossible to point for practical proofs of the advantages of trees in wide town streets to anything in the metropolis itself, we should still be able to decide the question in their favour by reference to such country towns as Cheltenham, whose principal charm is derived from its planted streets. But the very prevalent practice in London, in respect to the use of trees near houses, completely meets all objections to them when placed at the curb-stone, on the score of damp. If they cause drip and damp to an extent which would prove injurious when placed close to the kennel, how is it that trees are suffered and encouraged inside the railings of private enclosures, and often adjoining the walls of houses? The truth is, that the prejudice which excludes trees from the public ways in broad streets has no deep root in the general population, but is a mere vestry tradition, which took its rise in the modern English dark age of the last great wars. It is part and parcel of that sterile Georgian system which permitted the destruction of fish in rivers; made no provision besides the beer-shop for thirsty wayfarers; and encouraged the so-called pleasures of "night houses" and "finishes" in preference to music and dancing. An association for the promotion of street plantation, or the transforming of our dull and tedious metropolitan highways into gay and pleasant *boulevarts*, is much wanted.

An artistic plea might be put forward for what I am urging. There is a defect in the appearance of trees as seen behind a fence, however slight, which is inherent in such an arrangement: they do not even partially form part of the immediate foreground, but belong by their position to the middle distance of a street scene. Trees, in order to appear to advantage, must be so placed that some of them come into the foreground. A very pleasing example of this exists in Brompton Crescent, behind Michael's Place, where many, who have never cared to think of the cause, must have felt the effect. The curb-stone trees there are horse-chestnuts, and very fine types as regards form; but it is distressing to observe how badly they have been treated, although it is to them that the locality owes its principal charm.

J. B. M.

THE NEW STAINED GLASS IN WESTMINSTER ABBEY.

Sir,—A large quantity of stained glass is now used in the windows of our churches for memorial purposes; and, when well managed, this is a commendable practice; for it not only gracefully fulfils this purpose, but also adds to the beauty of the building. It is necessary, however, in these matters, to use discretion in adapting the designs to the peculiar situations and to the style and character of the buildings.

Both in St. Paul's Cathedral and Westminster Abbey there have been recent additions of stained glass; and when we think of the marvellous effect of the glowing but harmonious tints of the windows in part of York Cathedral, and glance at the bare aspect of most of those in the above-named places, it seems evident that a great deal more of this work is required. This, however, is a matter which will cause anxiety to the lovers of art; for the decoration of the windows will either add greatly to the beauty and interest of such a place as Westminster Abbey, or else be a cause of damage. Moreover, the ornamentation of those windows will be permanent evidence of the skill and taste of the present generation.

These remarks have been in part suggested by reading in the *Builder* a notice, copied from a local paper, of the window in Westminster Abbey to the memory of the late Robert Stephenson. The idea of busts of eminent engineers, with "a scarf over the shoulders of each individual," for the purpose of giving "to modern costume that more imposing and dignified appearance which belongs to the robes of the ancients," causes some misgivings. In the first place, I doubt if the modestly-natured and kindly-hearted Robert Stephenson would have approved of the arrangement of the portraits of his father, Telford, Smeaton, Watt, and Rennie, in inferior situations, in connexion with his own portrait; and to array an engineer who has been famous in our own days in a scarf appears to be somewhat ridiculous.

The introduction of portraiture to stained glass will always be a matter of difficulty, for such introductions will always cause a comparison with paintings in oil and water colours, the latter of which can be worked with so much greater ease, and with more certain effect; and the views of the ark, the building of the tabernacle, the first and second Temple, the High-level Bridge at Newcastle, &c., will be likely still further to cause us to contrast, with disadvantage, this kind of painting on the glass with that which is executed on an opaque substance.

In many instances a marked improvement is shown in the arrangement of the colours used in these works. The great masses of dull, heavy red and brownish tints have given place to hues of a more pearly description, which fails the more intense colours; but generally there seems to be a tendency to excessive light, and a want of depth and repose.

Before stained-glass windows are admitted into such important buildings as Westminster Abbey, the designs should be submitted for approval to competent persons.

An Artist.

A VOICE FROM THE RANKS.

Sir,—Being a weekly subscriber of your most valuable paper, and knowing you are always willing to insert a few lines to state a private soldier's grievances, and to open the eyes of the public at large, I am about to say a few words which will most likely be looked at by many. In the first place I am alluding to what is called barrack damages. It is but a few weeks back since each man in my corps paid one shilling out of his paltry pay. Now this week we have again the sum of sixpence to pay for the same thing; namely, for sand to throw upon the rooms after being cleaned out; blacklead, mops, brushes, and even 2s. 6d. for a common window fastening. Now, sir, I ask the public at large if these things are not enough to drive a private soldier to do what he would not think of doing, providing he had not such paltry imposing people thrusting their hands continually in his pocket to draw the last penny out? If our petty officers wish for sand and blacklead, why don't they pay for it, and not keep a man upon what is called low pay, that is, one large penny per day; and that sum has to find him in all his shining kit. If he is in the habit of using a little tobacco, where and how is he to find it? But, sir, when all is paid for, I can say with the truth a private soldier does not receive full pay above four months out of twelve. I, as well as many more of my comrades, will feel much obliged if you will insert this letter in your valuable paper, and hope I am not trespassing too much upon your valuable columns.

Justice and Full Pay.

RECOVERY OF CHARGES FOR TAKING OUT QUANTITIES.

Lansdown, Brothers, v. *Parish of St. Pancras.* This case was tried at Guildhall, on the 11th ult., before Mr. Justice Keating, and was an action brought by the plaintiffs, who are surveyors, of Bedford-place, Bloomsbury, for work and labour done, and expenses incurred, &c., in preparing quantities for proposed Industrial Schools at Finchley. The defendants pleaded never indebted. Plaintiffs' counsel,—Mr. Bovill, Q.C. (who did not appear); Hon. G. Denman, Q.C.; and Mr. S. Prentice. Defendant's counsel,—Mr. Overend, Q.C.; Mr. D. D. Keane; and Mr. L. Smith. Plaintiffs' attorney,—Mr. A. L. Edmonds. Defendant's attorney,—Mr. W. D. Cooper.

It appears the defendants, being desirous of erecting schools at Finchley, borrowed money to build them, and advertised for tenders; each builder to pay 2*l.* 2s. deposit for form of tender, &c. (to be returned when a *bona fide* tender was sent in), but stating that the quantities would not be supplied; but that builders might appoint a surveyor to prepare the quantities. Several builders responded and paid their two guineas to the parish, and were then requested to appoint a surveyor to take out the quantities on their behalf.

The plaintiffs having the majority of votes were selected, and in due course prepared the bills of quantities (no one else being appointed on behalf of the parish), and tenders were sent in; but being all above the amount proposed to be expended, were rejected; and after considerable discussion and delay the schools were finally abandoned. The plaintiffs', after several applications, then brought an action to recover their professional charges; and after hearing the evidence of

the plaintiffs, and of several eminent surveyors as to the custom of the profession, the jury gave a verdict for the plaintiffs, being for 1½ per cent. on the amount of the lowest tender, viz., on 14,900*l.*, and the lithography expenses.

MASTER BUILDERS AND THEIR SERVANTS.

A case affecting the interests of the building trades was heard at the Clerkenwell Sessions House, on Friday last, before the Assistant Judge, Mr. W. H. Bodkin. The prosecutors were Messrs. Duncanson & Moultrie, builders, of Upper Charlton-street, Fitzroy-square, who charged their estimating clerk, William Lawrence, with embezzlement. It appeared in evidence that the prisoner, upon entering their employ, was the means of introducing several customers, and works were carried out and superintended generally by the prisoner, who drew moneys on account, portions only of which he paid over to one of the partners, Mr. Moultrie. Defalcations to a serious amount soon showed themselves, and the prosecutors brought the present charge. It was proved that the prisoner was paid a weekly salary; but the prisoner's defence was that he was an agent and not a servant, and his counsel argued that it was a matter of indifference whether the moneys he received were paid at once and at the time he received them or not.

The jury held he was a servant, and brought in a verdict of guilty. The judge concurred in the verdict returned, and, after commenting on the conduct of the prisoner, sentenced him so three years' penal servitude.

DECISIONS UNDER BUILDING ACT.

At the Clerkenwell police court, Mr. Terrey, builder, of Bowling Green-lane, Clerkenwell, was summoned for raising the front external wall of a house, 10, Corporation-row, and erecting thereon a brick superstructure, without giving notice. Fined 10s., and 12s. 6d. costs to surveyor.

Books Received.

Passages from Modern English Poets. Illustrated by the Junior Etching Club. London: Day & Son.

In this handsome volume we have forty-five etchings by the happy little band of workers who take for their motto, "*Labor ipse voluptas.*" They have not confined themselves, as on previous occasions, to the illustration of a single author, but have roamed about for subjects; and a friend has been at "some pains and pulling down of books," to associate with the respective etchings not merely the passages which suggested or *might* have suggested each scene or group, but such poems as seemed calculated to illustrate the sentiment of the design. The volume is therefore a book of pleasant reading, irrespective of its needlework. The latter is certainly of varied degrees of merit; and two or three of the specimens perhaps have none; but these are the exceptions, and may be passed over. "Hagar and Ishmael," by J. Clark (if it were called by another name); "Summer Indolence," by J. E. Millais (another version of his pretty girl with the piece of grass in her mouth, from "Apple Blossoms"); H. S. Marks's "Rustic;" H. C. Whaite's "Head;" W. Severn's "Sea-boy" *à la* Hook; and others by Lewis, Smallfield, Lawless, Rossiter, and others, will give most pleasure. Amongst the amateurs who lend their aid are Viscount Bury (some Eastern Sketches) and Lord Gerald Fitzgerald, who is accomplished in more arts than one.

A Treatise on Ventilation, Natural and Artificial. By Robert Ritchie, C.E. London: Lockwood & Co. 1862.

The groundwork of this useful book on a most most important and practical subject formed the matter of an article for the "Cyclopædia" of the late Professor Nichol, of Glasgow, who thought well of it as a full and scientific analysis and criticism of what has been done and proposed on the subject of ventilation.

The first chapter is devoted to the consideration of ventilation in its chemical and physiological relations: in the second, natural or spontaneous ventilation is treated of; and in the third, fourth, and fifth chapters, forced ventilation, and a number of the artificial and mechanical agents employed to effect this, are described. In other works on ventilation where a systematic arrangement is made, it has been the buildings or other places which have been so described; but in this, the different agents or instruments to effect ventilation have been classified, whilst a description of the buildings, &c., has not been overlooked. The subjects treated of are illustrated by numerous plates and woodcuts; and for convenience, a summary of the whole treatise is subjoined.

The summary itself is too long for our limited space; but we shall select a few of the more important passages from it in order to show the nature and scope of the author's views.

"A copious supply of fresh or pure air is indispensable for sustaining life.

Salubrity of site is all-important as respects health, which is evidenced by the rate of mortality in different places.

Various analytical processes have been proposed for detecting atmospheric impurities. A very delicate test is required. Dr. Angus Smith has used permanganate of potash successfully; and it has been applied at various places, so as to bear upon the discovery of the hidden sources and finest shades of contamination. He has shown that the air in a crowded railway carriage is as impure as the effluvia from a sewer.

In ordinary domestic dwellings, advantage should as much as possible be taken of the natural movements of the atmosphere by the use of doors and windows, to aid in the expulsion of the vitiated air, and to effect a renovation of it within the apartment; and in summer, as well as winter, the common fire-place becomes a useful auxiliary; though an imperfect one, unless combined with other means.

Where artificial atmospheres are required, the heating medium to be employed is a matter of importance. Stoves of all kinds, which do not provide against the entire separation of the products of combustion from the air which they heat, are generators of poisonous gases; and stoves in which there exists the liability of overheating the air, and roasting the particles of matter floating in it, are pernicious to health.

In crowded apartments, spontaneous or natural ventilation cannot be relied on; and, in many circumstances, no thorough ventilation can be obtained unless forced ventilation is applied.

Although much difference of opinion exists as to whether an ascending or a descending removal of vitiated air is the best method to adopt; still, as the ascending movement of the air is the natural one, advantage should be taken of it to remove impure air as it is generated.

Of the many artificial contrivances the choice must be limited, in most instances, to a process which does not require a motive power to drive it.

Of the modes which require little attention in management, or where no motive power exists, forced ventilation may be obtained, and an uniform current by rarefaction created, by the heat of water or of steam. The same or even a more powerful effect is produced by the steam-jet; and these means avoid the products of combustion being mixed with the ventilating current; but, in the application, care must be exercised to adopt a safe and proper position for the apparatus.

Open fires, or gas-heat at the roofs of buildings, can be applied to effect this purpose; but by these the risk is incurred of the products of combustion being refluxed into the apartment, and being inhaled.

All artificial plans, such as smoke-pipes placed in ventilating conduits, and other contrivances, which run the risk of sending impure gases into houses, are pernicious and should be avoided, because they are in principle objectionable, and frustrate the object of removing the vitiated air.

Any method having a tendency to send back or return the exhaled air into an apartment is pernicious in principle: hence the sending of fresh air into a room from the ceiling, mixed with the products of respiration, is injurious to health.

Where a motor exists, such as steam-power or water-power, at a factory, a public building, a mine, or in a steam-ship, the fan-blower and screw present simple and readily available agents to produce a determinate movement of the air, which can be easily regulated and applied advantageously both for impelling air inwards or extracting it outwards."

The author deprecates the negligence which has so long existed, and still exists, in having a proper and thorough system of ventilation incorporated with the structure of a building, where many people are crowded together in close apartments; and remarks that the great advance which practical science has made since physical principles in modern times have become so generally recognized, calls for attention to a systematic arrangement being made in the construction of every building, whereby a pure supply of atmospheric air may be provided, regulated in temperature, and without annoyance to those in it.

First, however, so far at least as regards private dwellings, a strong public opinion, we suspect, must be formed in favour of ventilation,—just such an opinion as already exists against draughts, which are, unfortunately, a bad thing, and very much in the way of an amendment of the public opinion *quoad* ventilation; but it is one of the useful offices of pioneers to bring about this very modification of public opinion; and we are hopeful that our long-continued efforts are materially promotive of that very desirable end; and that shortly the result will show itself all at once in overwhelming force, as the new light of public opinion in favour of town and house drainage has of late years being doing. Meanwhile Mr. Ritchie's efforts will doubtless also have their influence towards the end in view; and he is quite awake to the necessity of bringing about the change in public opinion of which we have just been speaking.

Were people, he remarks, generally impressed with a knowledge of the simple facts enunciated, and were they to try to maintain pure air for the purposes of respiration, and justly view it as important as the food they eat; they would be mindful that without it good health could not be enjoyed. Were parents or heads of families, mothers in the nursery, clergymen, teachers, masters and foremen having people under their charge,—were clerks and servants and workmen, impressed with these truths, how different might be the attention paid to this subject, and how much more beneficial the results as regards the health of the community!

But, above all, we are persuaded, the efforts of sanitary pioneers ought to be directed towards the enlightenment of public opinion on the subject of ventilation of bed-rooms by night. As we have before remarked, fresh air *will* come in by day, in spite of the worst endeavours of stupid people to exclude it even in the most unventilated of dwellings; but by night every door and window, and too often every fireplace and every crevice, is closed for many hours continuously; and the unconscious sleepers are inhaling chiefly all that time the foul waste from their own and other lungs, and laying the sure seeds of ill health, disease, and premature death. Could the public only *see*, in their true aspect, the invisible exhalations which they thus reinhale; and trace their doings in the blood and throughout the body; they would be far more horrified than they so generally are at present at the risk of draughts from the mere opening of a window from the top.

The ventilation of bed-rooms is a branch of the subject which Mr. Ritchie has not neglected; although we think the portion of a single page he devotes to it might with advantage have been considerably extended. He says:—

"There cannot be a doubt that the ventilation of bed-rooms has been far too much overlooked. When it is considered that a third part of every day's existence is generally spent in the bed-room, where pure air is most necessary, it is surprising that the importance of a constant supply of fresh air for respiration, as well as the necessity of having the air of the room thoroughly renovated when unoccupied, is often overlooked. A free and continuous circulation of pure air in the bed-room during the night is essential for every one,—the more so where a number of persons sleep in one apartment, as in an hospital, barracks, or in a nursery-room. Persons will sleep much sounder where the air is fresh, and they will rise more invigorated. In general, fires, even in winter, are not much used in bed-rooms, except in the houses of the wealthy; hence ventilation is dependent entirely upon the windows."

Typhoid fevers are extending amongst the upper classes; partly, we are persuaded, from the increasing luxury and snugness of their dwellings, and especially of their bed-rooms. The modern luxury, shall we call it, of having water-closets within dwellings, and even close to the bedrooms, when not thoroughly ventilated, must immensely increase the mischief arising from snug bed-rooms.

With the quotation of a few words more particularly applicable to the rich and well to do, and especially as regards bed-rooms, we must conclude our notice of Mr. Ritchie's work:—

"One great fault often pointed out in the construction of rooms is that they are made too tight. Fresh air is shut out from the houses of the rich as well as of the poor;—for no air can get into the rooms but by the crevices of doors and windows. It presents the idea to the mind that people can live without air; for the inmates of some houses are not satisfied unless the perceptible entrance of air is prevented. In a bed-room which came under observation, not only was the fresh air kept out by means of a double door; but every crevice was air-tight; whilst a smoke-board effectually occluded the chimney. Such a room would require to contain as much air as would keep the sleeper alive till morning. It is to be presumed that it was not known by the occupier that a man may be poisoned by the breath from his own lungs."

VARIORUM.

"Sussex Archæological Collections relating to the History and Antiquities of the County: published by the Sussex Archæological Society. Vol. XIII. Sussex: G. B. Bacon, Lewes." Some delay has occurred in the issue of this volume. It contains a variety of interesting matter. The first paper, "Some Memorials of Old Lewes. By William Figg, F.S.A," is amongst the best in the volume. There are also papers on "Waldron: its Church, Mansions, and Manors," by W. H. Blaauw, M.A.; on "The College and Priory of Hastings and the Priory of Warbleton," by the Rev. E. Turner, M.A.; on the "Mural Paintings in Slaugham Church," by the Rev. C. H. Campion, M.A.; on "Monumental Inscriptions, East Blatchington," communicated by the Rev. R. N. Dennis, rector; and various others. The volume is also illustrated by a good many fair engravings.——"Fifth Annual Report of the Board of Commissioners of the Central Park, New York. Bryant, Nassau-street. 1862." It is pleasant to find that "horrid war" is not obliterating every peaceful pursuit at New York. This elaborate report shows that progress is still being made with the Central Park of that city, and that no expense is being spared in its construction and adornment. The park was visited during the past year by 2,404,659 persons. There is a ride round a lake as in Hyde-park, and a conservatory very much like our own at Kew: the picturesque scenery of the park is adorned by

various rustic structures, forming shaded seats and vine-covered walks; by ornamental bridges, and of course innumerable trees, shrubs, and flowers, as well as by a multitude of statues and *bas reliefs*: one lady alone has presented no less than eighty-seven casts of statues, from the works of her late husband, Mr. Thomas Crawford, sculptor, besides twenty-two *bas reliefs* and a number of statuary and monumental sketches. A statue of Flora, by Mr. Haight, long known as one of his best works, has been presented by that gentleman; and many fine birds of the swan, peacock, crane, and eagle tribes, as well as deer, gold-fish, &c., have also been presented by the citizens to their fine park. The report before us is illustrated by various engravings, including a map of a portion of the park, diagrams of bridges, roads, &c.——"The Quarterly Review: No. 223: July, 1862. London: Murray," contains a well-written paper on the Brunels, partly based on the memoir of the elder Brunel, by Mr. R. Beamish, F.R.S.; and a very severe one on the International Exhibition building and its management; with the usual extent of other matter of less immediate interest to our professional readers. The author of the paper on the Brunels says of the younger,—

"Notwithstanding Mr. Brunel's great engineering skill, it is to be doubted whether he possessed much of the genius of an original inventor. He took up a principle already established, and pushed it further, exhibiting in a striking light the development of which the ideas of others were capable. His ruling idea was magnitude; he had an ambition to make everything bigger than he had found it. Thus he found the railway gauge 4 feet 8½ inches, and he increased it to 7 feet, thereby involving wider tunnels, more expensive works, and a heavier equipment in working stock. So in the atmospheric railway, he found the tube in use on the Dalkey Railway 15 inches in diameter, and on the South Devon line he doubled it. Then in steam-ships, his *Great Western* was nearly double the power and tonnage of any previous steamer; the *Great Britain*, which followed, was double the tonnage of the *Great Western*; and the *Great Eastern* exceeded in size all that the most imaginative shipbuilder had conceived to be possible. It was a race of bigness run against himself as well as others. But in the case of the *Great Eastern* steam-ship, as of the Great Western Railway, it is not probable that Mr. Brunel's example will be followed; for it is now pretty well understood that ships, like railways, may be made *too* big, at least for those who own them . . . . . It is unquestionable that both railway travelling and steam-navigation were greatly advanced by the speculative ability of Mr. Brunel, and the spirit and liberality with which he was supported by the shareholders of the great undertakings for which he acted as engineer."

——"A Practical Treatise on the Cultivation of the Grape-vine. By William Thomson, gardener to the Duke of Buccleuch, at Dalkeith Park, Scotland. Blackwood & Sons, Edinburgh and London. 1862."—This very well written volume is intended more especially for the use of amateurs and tenants of villas. It treats briefly of the construction of vineries and the general management of vines. The varieties of the grape-vine must be very numerous. The French Government, on one occasion, made a collection of 1,400 varieties in one nursery at the Luxembourg, and this was supposed to be only a moiety of those in cultivation in France alone. The late Sir Robert Peel's wise measure, removing the duty off glass, has, it seems, had an immense influence in extending the formation of vineries in this country.——"A Handbook of Volumetrical Analysis. By R. H. Scott, M.A., Sec. G.S., Dublin, Longman & Co.," has been issued with the assistance of the Board of Trinity College, Dublin; and appears to be a reliable book of its kind; of use in mineralogy, mining, and various manufactures, as well as in other cases where chemical analysis is requisite.

Miscellanea.

Metropolis Local Management Act Amendment Bill.—This Bill has been read a third time, and passed in the House of Lords.

Thames Embankment Bill.—The amendments on this Bill have been agreed to in the Lords; and the Bill has been read a third time and passed.

Great Engineering Works.—When the Marple Aqueduct, near Stockport, was erected, says the *Macclesfield Courier*, it was considered a masterpiece of engineering skill, worthy of a Telford or a Stephenson. Within 200 yards, a rival is rapidly springing up, in the shape of an immense viaduct of fourteen or sixteen arches, carrying across the Hyde and Compstall Railway, at a much greater altitude than the canal, along with which it runs parallel, on the easterly or Compstall side. It is of stone; and the piers are so far advanced that the framework is being erected, preparatory to commencing the arches. The railway is completed as far as Hatherlow.

Railway Returns.—The traffic receipts of railways in the United Kingdom amounted, for the week ending the 19th of July, on 10,304 miles, to 607,555*l.*; and for the corresponding week of last year, on 9,961 miles, to 582,335*l.*: showing an increase of 343 miles, and of 25,220*l.* in the receipts.

New Motive Power.—The new power invented by Mr. Lenoir, for which a medal has been awarded at the International Exhibition, has, it is said, been tried with success in the printing-office of the *Moniteur Universel*. The new system— a model of which is on view in the machinery department of the International Exhibition—consists of the expansion of air by gas, lighted by means of electricity.

Spectral Analysis. — Rubidium, the rare alkaline metal discovered by Mr. Bunsen, in certain mineral waters, by means of the spectrum analysis, has been recently found by Mr. Grandeau in the ashes of beetroot, tobacco, coffee, tea, and grapes. The spectrum of tobacco gave bands characteristic of lime, lithium, potassium, and rubidium. The facts show that rubidium is one of the most widely-diffused bodies in nature, since vegetables of the most diverse kinds are found to take it up from the soil. Though widely distributed, however, the quantities must be very minute, since it has required the subtle and delicate operation of spectral analysis to discover the new metal.

Kensington-gardens.—In reply to a question put by Mr. Lewis in the Commons, Mr. Cowper said that in one of the central parts of Kensington-gardens, under the trees, there had been, during the late wet weather, an accumulation of water that could easily be got rid of by drainage; but he was afraid the drainage would also get rid of the trees. Many trees had been killed in former times in Kensington-gardens by the drains; and he rightly considered that one of the duties of his office was to take care of the old trees. With respect to the works at the upper end of the Serpentine, the contractor who was sinking the well had brought up a considerable supply of water, and was now occupied in boring into the chalk; and it was expected that a still larger supply might be obtained from the extended works.

Self-acting Organs: a refractory one.—In a small church at a little village near Brighton, the congregation recently bought a self-acting organ; a compact and convenient instrument, playing forty tunes. The sexton had instructions how to set it a-going and how to stop it; but, unfortunately, he forgot the latter part of his business; and, after singing the first four verses of a hymn before the sermon, the organ could not be stopped; and it continued playing two verses more; then stopped for a little; but just as the clergyman had completed the words "Let us pray," the organ clicked and started a fresh tune. The minister waited patiently; and, on its stopping once more, repeated the words "Let us pray;" when click went the organ again, and started off on another tune. The sexton and others continued their exertions to find out the proper spring; but no one could stop it; so four stout men were got to shoulder the perverse instrument; and they carried it down the centre aisle of the church playing away all the while, into the churchyard; where it continued clicking and playing until the whole forty tunes were finished.

Northern Architectural Association.—At the usual quarterly meeting of the Northern Architectural Association, on Wednesday, July 24th,—Mr. T. Moore occupying the chair,—the minutes of the previous meeting having been read, a report of the proceedings of the proposed Architectural Alliance, held in London on July 2nd (to which we have already alluded) was submitted by the delegates appointed at the last meeting to represent the Northern Association. A discussion on the minutes of the meeting *seriatim* took place; and on the motion of Mr. Haswell it was resolved that the association should send in their adhesion to the alliance. The subject of the annual excursion meeting also came on for discussion, and the locality fixed on was Richmond, providing satisfactory arrangements might be made with the railway company; and failing in this, arrangements would be made for an excursion to Warkworth. Some conversation took place on the propriety of memorializing the Town Council of Newcastle in reference to the employment of public officers on architectural works. Mr. Oliver thought that the subject should be referred to the committee, and moved a resolution that the committee should be instructed to reconsider the matter; and, if they thought it necessary, to prepare a memorial by the next meeting. Carried unanimously.

Royal Academy.—Lord Bury, Treasurer of the Household, has brought up the reply of her Majesty to the address of the House, praying for the appointment of a royal commission to inquire into the constitution of the Royal Academy. Her Majesty stated that she had given directions for the appointment of a commission for that purpose.

"The Martyrdom of Huss."—This picture, by Lessing, now on view at the Egyptian Hall, is a work of very high class, somewhat tame in parts it may be, but full of sentiment rightly expressed. It should be seen by all who desire to know the position of the German school,—not thoroughly represented in the Palace of Art and Industry.

The Rome and Naples Railway.—The railway which is to unite Rome to Naples is now entirely completed. The section from Rome to the Pontifical frontier was to be opened, by last accounts, in a few days. Although this part has been finished since the end of last year, it has required six months to induce the Government to put the line in operation. However, the Pontifical Government requires that the Pontifical employés of the railway from Rome to Naples shall not in any case pass the frontier. Even the rolling stock is to be special. After having arrived at Ceprano travellers will have to change trains. There is no junction of the rails on the frontier; and it will, therefore, be necessary to make a bit of the journey from one train on foot in order to reach the other.

Ulster Bank, Longford.—A new bank is in progress of erection at Longford, for the Ulster Company. The front of the building is three stories high, and about 42 feet to the cornice, having a frontage of 38 feet, connected with the adjoining houses by low screen walls on each side. The entire of the front is of chiselled limestone, and Italian in character. The ground-floor windows (three in number), which have circular heads with carved keystones, light the cash-office; the entrance door to which, at the left side, corresponds in height with the windows. The arms of Ulster are inserted in the panel between the doorhead and cill of semicircular window, over. On the ground-floor, the cash-office is entered by the public to the left of hall; the manager having a private entrance, and also to his house. The cash-office is 25 feet square and 18 feet high. The walls are divided into pilasters, with base and impost moulding, from which spring arches corresponding to the windows. A modillion cornice, and the ceiling divided into nine coffers, give a rich appearance to the general effect. At the end of the office a coved recess, with ornamented panelled ceiling, provides for entrance to the space allotted for the cashier and clerks; also to the safe, manager's room, and lavatories. The architect is Mr. James Bell, jun., Dublin; contractor, Mr. Walter Doolin, of Dublin. The total outlay will be about 2,000*l.*

The Prince Consort's Mausoleum at Frogmore.—The mausoleum now in course of erection, and which we have previously noticed, consists of a central cell, with four transepts branching north, south, east, and west, with a porch adjoining the western transept, according to a description which has reached us. The whole floor is supported by brick vaults of massive work, which at the same time form chambers, with loopholes for the purposes of ventilation and the prevention of damp rising to the superstructure. They are entered by a small flight of stone steps. The central cell will be lighted by three-light semicircular-headed windows in the clerestory, which will be externally decorated with Aberdeen granite shafts and heads. The copper roof of the central cell (which is on an octagonal plan) rises from the wall to the apex with a flat pitch in the manner of an Italian campanile, and will be surmounted with a gilt cross. Under this roof will be the sarcophagus for the remains of the Prince Consort. The reclining statue of the Prince will be executed by Baron Marochetti. The four transepts are square on plan, are lighted by windows similar to those in the clerestory of the central cell, and will have pedimented copper roofs. The porch, which will be entered by a flight of stone steps, will be lighted with circular-headed three-light windows, with shafts and heads of Guernsey granite; and the front will be supported by monolithic granite columns, similar to those already finished in the mausoleum of the Duchess of Kent. The whole of the exterior will be decorated with Aberdeen and Guernsey granite, and with red Mansfield and various stones. The interior will be in different coloured marbles and stone. The building is in the Italian style, and stands upon a base of concrete, 6 feet in thickness. The erection, which is 70 feet in length, and will be about the same height, will be adorned by several statues.

The Loan Collection, South Kensington.—The first part of the catalogue is now printed, and will be found a very interesting and useful companion.

The Cost of the Battersea Meeting.—The show-yard, with horse-boxes at 4*l.* each, 4,500*l.*; the stock prizes and medals about 4,000*l.*; the forage for stock nearly 2,000*l.*; the land for steam ploughing at Farningham, 600*l.*; the police, 300*l.*: in all 15,000*l.* have been expended; whilst the receipts amount to about 12,000*l.*; so that the Agricultural Society is a loser of some 3,000*l.*

The Coventry School of Art.—At a meeting of the committee of the Coventry School of Art, it has been decided to commence the new building for the school in Ford-street forthwith. The building fund requires the strenuous support of every friend of art education in the district. The first fruits of the old School of Design are now apparent in the Coventry ribbons shown at the International Exhibition, most of which were designed and draughted by students.

Fall of a Church Tower.—The *Bury Post* reports the fall of the tower of Isleham Church, Suffolk. The entire edifice, which may be dated as of the 14th century, has for some time past been considered in an insecure state; plans and specification for its restoration were therefore obtained a short time since from a London architect; and Mr. Thomas Brown, of Isleham, became the contractor, under Mr. William Brinkley, of London, a native of Woolpit, Suffolk, as clerk of the works. The tower was considered to be the most dangerous part of the fabric; and in a conversation with Mr. Brinkley, only two hours before the tower fell, that gentleman stated his opinion that it had, at some time or other, been struck by lightning; and the appearance of the ruins fully bears out the conjecture. Indeed, Messrs. Cowell & Hook, contractors, of Soham, had actually prepared an estimate, but, foreseeing the danger, wisely forbore to send it in. Every precaution had, however, been taken: direct shores had been placed inside and out, and also double raking shores, framed and bolted together, of immense proportions, to a height of 60 feet, which appeared sufficient, even if the lower part of the tower did give way, to hold the bells and frame together with the upper part of the tower in their proper position; notwithstanding which, the workmen on the scaffolding (one of whom saw a mullion fall from the west window, and gave the alarm) had just time to escape, when the whole mass came perpendicularly down, happily without the loss of a single life or the fracture of a limb; neither are the bells broken; indeed, the steeple appears to have sunk down on its own site.

Removal of St. Thomas's Hospital.—The select committee of the House of Commons has taken evidence in reference to the Bill for conveying the site of the hospital to the Charing-cross Railway Company, and acquiring a new site for the hospital. Mr. Tite, M.P., and Mr. H. A. Hunt, were amongst the witnesses in favour of the Bill. Mr. Drew, on the part of the parish of Bermondsey, sought to insert words in the preamble which should limit the governors in their selection of a site to the south side of the Thames, and that it should not be at a greater distance than a mile and a half from the Elephant and Castle, at Newington. The committee were of opinion that the words proposed should not be inserted, and that the preamble was proved. The Bill was ordered to be reported to the House. We learn from the *Lancet* that at the Surrey Gardens matters are progressing with rapidity. There are nearly 500 men at work, and no time is being lost in fitting up and preparing the large music-hall for at least 250 patients. The ground-floor will be chiefly devoted to a large accident ward, with operating theatre and other conveniences: the first-floor, with a division running down the centre, will afford accommodation to medical and surgical patients; whilst the second-floor, which is remarkably lofty, will be appropriated exclusively to female patients. On both these floors, equally with the ground-floor, will be arranged operating theatres, and proper rooms for the nurses and servants. North of the building devoted to the in-patients is a single-story edifice, forming the dispensing department; and another contains divisions for the out-patients. Near this are the dormitory and other rooms for the Nightingale nurses, for the comfort and convenience of whom all necessary arrangements are being effected. In another part of the gardens is a large building set apart for the purposes of a library and museum. Near this are to be the school-rooms, dissecting-room, and other compartments, which, it is expected, will be built and completed for occupation and use before the 1st of October.

A Railway up a Mountain.—The Dun Mountain Company, in the province of New Zealand, have constructed a railway, 14 miles in length, rising in that distance 2,800 feet, or 1 foot in 19. The cost of construction was 2,000*l.* a mile. The rail is described as coiling, like a huge snake, around the face of the almost precipitous mountain. One thousand tons of chrome are brought down it weekly by the power of gravitation; the empty trucks being taken up again by horse-power. [Might not the force of the full descending trucks have been used to carry up the empty ones?] The railway terminates at the outskirts of the town, whence it is drawn by horses to the port of shipment.

Utilizing the Waste Heat of Furnaces.—In the re-burning of animal charcoal in revolving retorts much heat has hitherto been wasted: for this, Mr. P. Cowan (of Cowan & Sons), of Barnes, proposes a remedy; having just patented an invention the object of which is to utilize this lost heat. He proposes to apply to, or combine with, the furnace or flues, a boiler, or generator, in such position as to be exposed to the action of the waste heat of the furnace; so that, if desired, steam shall be generated in such boiler, or generator, simultaneously with the carrying on the process of re-burning the charcoal. The steam so produced may be carried off for use as required. The claim includes partially-revolving chambers also.

Her Majesty's Theatre.—The regular season having closed, Mr. Mapleson has issued an address, wherein he says, after tendering thanks for support and patronage, "It is my intention, during the next six months, to make myself acquainted personally with any talent that exists abroad, in order that I may be able, next season, to place before you a galaxy of talent unrivalled in London, supported by an orchestra and chorus complete in every particular. In the production of operatic spectacle I shall be greatly assisted by some very extensive alterations that are to be made in the theatre, which will render the stage more capacious, and the task of producing each opera with completeness more easy of accomplishment."

Lunatic Asylum for the City of London. On Tuesday last, in the presence of several of the aldermen, and many of the rest of the Common Council, some of the lunacy commissioners, and of the magistrates of Middlesex, the foundation-stone of a Pauper Lunatic Asylum for the City of London, intended to accommodate 250 patients, and estimated to cost nearly 50,000*l.*, was laid at Stone, near Dartford. The site chosen for the intended asylum consists of upwards of 30 acres of ground between Dartford and Greenhithe, and has been bought for the purpose of Mr. Charles White, a citizen and a landed proprietor in the neighbourhood, for about 3,300*l.* The building will be erected from designs prepared by Mr. Bunning, the City architect, and approved by the Commissioners in Lunacy.

The Frescoes in Parliament.—In reply to questions put by Mr. C. Bentinck, last week, Mr. Cowper said the decay was quite enough to excite apprehension. Fresco had been adopted in preference to oil, at the recommendation of the Fine Arts Commission; and a commission of eminent artists were inquiring into the causes of decay. There was nothing in the walls injurious to the frescoes: the defect arose from the formation of a thin pellicle of carbonate of lime upon the surface of the picture; or from its being affected by deleterious agencies in the colouring matter employed. He believed the decay was owing to preventable causes, and would be avoided in future. Lately the water-glass method had been adopted, with very satisfactory results. He quite concurred in approbation of the diligence and accuracy with which Messrs. Maclise, Cope, & Ward had fulfilled their engagement. With regard to Mr. Dyce, the Fine Arts Commission unfortunately neglected to stipulate that the payment to that gentleman should depend upon the work being performed. The money was therefore paid; but the work was not completed, though fourteen years had elapsed. He (Mr. Cowper) could offer no explanation of this conduct. Mr. Dyce had not only deprived her Majesty of the use of the robing-room, but had injured his own interests by shutting out his frescoes from notice and observation. No more had been paid to Mr. Herbert than he was entitled to. The delay in his case was owing to the high standard of excellence which he had adopted. Mr. Hennessy asserted that Mr. Herbert had destroyed 446 square feet of his works in consequence of dissatisfaction with them. The value of one square foot of his works was 8*l.*: he had therefore destroyed over 3,000*l.* worth of his works, in order that he might produce what would be more valued by the public.

Drainage of a Lake in Algeria.—The *Akhbar* of Algiers states that the Lake Halloula is now completely drained; and that the mud at the bottom is similar to that deposited by the Nile; which is considered a good omen of the future fertility of the 1,800 hectares (4,450 acres) reclaimed by this operation. Apprehensions were at first entertained that dangerous consequences might result from the putrefactions of the immense quantities of eels and fish contained in the lake; but, fortunately, vultures flocked in thousands from all parts of the country, and soon devoured them all.

The Exhibition.—On Monday last the various men and boys in the employ of Messrs. R. Watts & Son, of Motcomb-street, builders, to the number of 120, were by them presented with a day's holiday and entrance-ticket to the International Exhibition. Matters of this kind show that harmony of sentiment is again being established between employers and employed; and not having seen a similar instance in the London trade is our excuse for troubling you. On behalf of the men.

R. A.

TENDERS.

For building new chapel for the United Methodist Free Church, Longton, Staffordshire. Mr. R. Scrivener, architect:—

Challinor & Inskip	£1,696, 0 0
Shenton	1,500 0 0
Shaw	1,200 0 0
Collis & Hudson (accepted)	1,150 0 0

For the erection of a shop, cellars, &c., at the corner of Gower-street North and Euston-road, for Mr. Ebenezer Jackson. Mr. James Harrison, architect. Quantities supplied by Mr. A. W. Q. Nicoll:—

		Extra Mahogany Sashes and Doors.
Taylor	£835 0 0	£15 0 0
Downs	830 0 0	67 0 0
Hodges	714 0 0	47 0 0
A & J. Smith	687 0 0	52 0 0

For extending the Bakers' Almshouses, Lea Bridge-road. Mr. T. E. Knightley, architect:—

Pritchard & Son	£2,772 0 0
Piper & Wheeler	2,710 0 0
Marrs	2,610 0 0
F. & F. Wood	2,580 0 0
Downs	2,530 0 0
Hart	2,473 0 0
Foster	2,469 0 0
Warskitt	2,385 0 0

For fever wards, Edmonton Union. Mr. T. E. Knightley, architect:—

Warskitt	£1,523 0 0
Bond	1,456 0 0
Kerry	1,364 0 0
Devereux	1,299 0 0
Hodges	1,284 0 0
Patman	1,267 0 0
Humphrys	1,250 0 0
Palmer & Yates	1,230 0 0
Lingell (accepted)	1,193 0 0
Harradine	1,192 0 0
George	1,150 0 0

For schools at West Ham. Mr. T. E. Knightley, architect:—

Foster	£1,357 0 0
Pritchard & Son	1,349 0 0
F. & F. Wood	1,324 0 0
Rivett	1,300 0 0

For house at Biggleswade, Bedfordshire, for Mr. Lindsell. Mr. S. J. Jackson, architect:—

Bryant (accepted)	£2,964 0 0

For Lecture-hall to Union Church, Putney. Mr. Charles R. Gribble, architect:—

Aries (accepted)	£510 0 0

For the erection of a greenhouse range at Hollywood House, Wimbledon Park (first contract). Mr. Gribble, architect:—

Gray	£375 0 0
Adamson & Sons (accepted)	350 0 0

For additional story to No. 26, Brompton-square. Mr. Gribble, architect:—

Stimpson (accepted)	£152 10 0

Accepted for four dwelling-houses, in De Grey-road, Woodhouse-lane, Leeds, for Mr. C. Ellison. Mr. William Hill, architect:—

Boothman, for excavator, bricklayer, and mason's work	£1,327 14 0
Nicholson & Son, for carpenter and joiner's work	998 0 0
Simmons & Blakeley, for plasterer's work	195 0 0
Story, for plumber and glazier's work	365 0 0
Watson & Wormald, for slater's work	70 0 0
Jackson, for painter's work	52 10 0

Accepted for two dwelling-houses in De Grey-road, Woodhouse-lane, Leeds, for Mr. Dixon. Mr. William Hill, architect:—

Boothman, for excavator, bricklayer, and mason's work	£676 0 0
Pearson, for carpenter and joiner's work	509 0 0
Barker, for plasterer's work	130 15 0
Braithwaite & Myers, for plumber and glazier's work	197 18 0
Heavyside & Son, for slater's work	36 0 0
Wood & Son, for painter's work	25 5 0